International Education Guide

FOR THE ASSESSMENT OF EDUCATION FROM KOREA

IQAS

INTERNATIONAL QUALIFICATIONS ASSESSMENT SERVICE

Alberta
Canada

Welcome to the Alberta Government's International Education Guides

The International Qualifications Assessment Service (IQAS) developed the International Education Guides for educational institutions, employers and professional licensing bodies to help facilitate and streamline their decisions regarding the recognition of international credentials.

These guides compare educational systems from around the world to educational standards in Canada. The assessment recommendations contained in the guides are based on extensive research and well documented standards and criteria. This research project, a first in Canada, is based on a broad range of international resources and considerable expertise within the IQAS program.

Organizations can use these guides to make accurate and efficient decisions regarding the recognition of international credentials. The International Education Guides serve as a resource comparing Alberta standards with those of other countries, and will assist all those who need to make informed decisions, including:

- employers who need to know whether an applicant with international credentials meets the educational requirements for a job, and how to obtain information comparing the applicant's credentials to educational standards in Alberta and Canada
- educational institutions that need to make a decision about whether a prospective student meets the education requirements for admission, and who need to find accurate and reliable information about the educational system of another country
- professional licensing bodies that need to know whether an applicant meets the educational standards for licensing bodies

The guides include a country overview, historical educational overview, description of school education, higher education, professional/technical/vocational education, teacher education, grading scales, documentation for educational credentials and a bibliography.

The guides also include credential placement recommendations on how credentials compare to educational standards in Alberta, Canada.

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Country Overview

Land

Located in the northeast corner of Asia, the Korean peninsula lies between 33° and 43° north and 124° and 132° east. China and Russia border to the north, and Japan is located southeast across the Korea Strait. The Republic of Korea (ROK), commonly known as South Korea, occupies the southern half of the peninsula; the Democratic People's Republic of Korea (DPRK), or North Korea, lies to the north.

MAP OF THE KOREAN PENINSULA

South Korea has one time zone—nine hours ahead of Coordinated Universal Time. Alberta is seven hours behind UTC and therefore 16 hours behind South Korea.

South Korea is about one-third larger than the province of New Brunswick, occupying 98,190 square kilometres. This equates to 45 per cent of the total area of the Korean Peninsula (CIA, 2006). The border with North Korea, roughly along the 38th parallel, is marked by a four-kilometre-wide Demilitarized Zone (DMZ). The total coastline measures 2,413 kilometres: Korea Bay and the Yellow Sea along the west, and the Sea of Japan, or what Koreans call the East Sea, along the east.

Alberta's 661,190 square kilometres, stretching from the 49th parallel to latitude 60, measure about seven times the size of South Korea.

Mountains and hills cover about 70 per cent of South Korea. Low hills in the south and west lead to increasingly higher mountains in the north and east. The country's major mountain system, the Taebaek range, runs north to south, parallel to the east coast. Another mountain range, the Sobaek, branches from the Taebaek range and runs northeast to southwest. The highest peak is Mount Hallasan, an extinct volcano located on Jeju Island off the southeast coast of the peninsula, rising 1,950 metres above sea level.

The major rivers generally flow either east to west or north to south, draining the western and southern slopes of the peninsula. The longest river, Naktonggang, is 525 kilometres long and flows southward to the port city of Busan. The Hangang, 514 kilometres long, runs northwest through Seoul and empties into the Yellow Sea. The well-cultivated river basins are densely populated areas.

The Asian continent and the surrounding seas affect South Korea's temperate climate. It has four distinct seasons, with windy cold winters and rainy hot summers. Spring and autumn are sunny and generally dry. Seoul has an annual average temperature of 12.2 C. It can reach as high as 38.4 C in the summer, with average temperatures above 20 C from June through September, and can drop as low as –19.2 C in the winter (Seoul Metropolitan Government, 2006). Rainfall in South Korea concentrates in the summer months and averages more than 1,000 millimetres annually.

PEOPLE AND LANGUAGE

In 2004, estimates put South Korea's population at 48,199,227 (Korean Overseas Information Service). The official growth rate is 0.6 per cent and is expected to decline to 0.06 per cent by 2020.

Alberta's population of 3,183,312 equates to less than seven per cent of South Korea's population, illustrating extremes in population density.

Alberta stands at 4.6 people per square kilometre and Korea at 474 people per square kilometre.

(Statistics Canada, 2001 & Korea Overseas Information Service, 2006)

South Korea's age structure has changed significantly since the 1950s, driven largely by falling birthrates and rising life expectancies. The population is growing older:

	1999	2002	2020
% of population aged 65 or older	6.9%	7.9%	15.1% (estimated)

As of 2004, overall life expectancy is 75.6 years:

- 71.9 years for men
- 79.5 years for women

Because of industrialization and urbanization, rural residents have been migrating into the cities, especially the metropolitan areas. Today, more than 80 per cent of South Koreans live in urban areas. Population density is very high, with approximately 474 persons per square kilometre.

For over 2000 years, Confucianism, Buddhism and Taoism have exerted a great influence on the Korean people and society. Christianity, both Catholicism and Protestantism, was introduced into Korea in the 18th and 19th centuries. According to a 1995 survey, just over 50 per cent of Koreans profess religious affiliation:

- Buddhists, 46 per cent
- Protestants, 39 per cent
- Catholics, 13 per cent

Confucianism is not considered a religion and therefore not represented in the religious population. In addition, folk customs and beliefs, including shamanism, still play a major role in everyday life.

Except for a small minority of ethnic Chinese, the Korean population is homogeneous, believed to be descendants of Mongol tribes that migrated to the Korean Peninsula from Central Asia. They speak a single language—Korean—in six dialects. The dialect of the capital, Seoul, is the basis for modern standard Korean. Koreans who speak different dialects can generally understand each other without difficulty. The fact that all Koreans speak and write the same language is considered an important factor in forging a strong national identity.

The Korean language belongs to the Altaic family, which also includes Turkish, Mongolian, Tungus-Manchu and Japanese. The relationship among these languages and even their grouping into a language family remain a matter of debate among linguists. Like Japanese, Korean has substantially borrowed vocabulary from Chinese, just as many European languages have absorbed words of Latin and Greek origin.

The Korean phonetic alphabet—Hangeul—was developed in the 15th century. At that time, the upper class wrote in Chinese characters, called Hanja, while the general populace used Idu, a Chinese-based Korean character system. A main purpose of inventing Hangeul was to enable Koreans to write their language without using Chinese characters. Several writing systems, including Chinese characters and the Uygur and Mongolian scripts, were consulted in designing the Korean writing system. The system adopted the tripartite division of syllables into initial, medial and final phonemes, as opposed to the bipartite division of initials and finals in Chinese phonology.

HANGEUL, THE KOREAN ALPHABET*

*Korean Overseas Information Service

The modern version of Hangeul has 24 letters, including 10 vowels and 14 consonants, to form numerous syllabic groupings. In North Korea the Hangeul system, with some variations, is used exclusively, whereas in South Korea, Hanja is still used either separately or along with Hangeul. Hangeul is considered an easy language to learn and, some believe, partially accounts for the high literacy rate in Korea.

Due to the variety of its vowels and consonants, Korean is a difficult language to romanize. The McCune-Reischauer system of romanization has been used widely, especially in Western countries, since its development in 1939. In Korea the Ministry of Education system, first developed in 1959, was revised along the lines of the McCune-Reischauer system in 1984. In 2000, however, the Korean government made a drastic revision of their romanization system in an effort to make the language more compatible with computer and Internet use. This revised romanization system of Korean is used widely in South Korea today. Unlike the McCune-Reischauer system, the new Korean system does not have diacritical signs or the apostrophe. Well-established family names and business names will not have to conform to the new rules—Samsung will not be required to change to "Samseong," for example.

Table 1 gives examples of the romanization of place names under the old and the new systems.

HISTORY

Human habitation of the Korean peninsula dates back half a million years. Recent excavations have found human artifacts and debris from the lower paleolithic period. According to legend, Gojoseon, the oldest kingdom of Korea, was founded by Dangun in 2333 BC. About 2000 BC, a pottery culture spread to the peninsula from China. The Bronze Age arrived around the 15th century BC.

During the reign of the Han dynasty in China (206 BC–AD 220), the kingdom of Gojoseon declined. A massive expedition launched by Emperor Wudi of Han in 109 BC resulted in Gojoseon's defeat and the establishment of four Chinese "commanderies." The Koreans, however, fought back and destroyed the last of the commands by the early fourth century. During the same period an iron culture developed and a number of walled city states grew prominent.

Baekje and Silla in the south and Goguryeo in the north give name to the Three Kingdoms period (first to seventh centuries). Confucian statecraft and Buddhism were introduced to the Korean Peninsula and served as unifying factors. The three kingdoms competed against each other in building their state power and in territorial expansion.

By 668 Silla (57 BC–AD 935), allied with the Tang dynasty (618–907) in China, defeated both Baekje and Goguryeo and unified the peninsula. It proceeded to reclaim Chinese-held territories and, by 676, gained control of most of the peninsula. This ensured the independent development of Korea despite strong outside influences.

Silla, which had its capital near the modern city of Busan, reached the peak of its power and prosperity in the mid-eighth century. It developed a strong Buddhist tradition and invented Idu, the Korean transcription system based on Chinese characters. As Silla declined, a new state emerged. Wang Geon established the Goryeo dynasty (918–1392),

TABLE 1. ROMANIZATION OF KOREAN PLACE NAMES UNDER THE OLD AND NEW SYSTEMS*

KOREAN	OLD	NEW	KOREAN	OLD	NEW
부산	Pusan	Busan	대구	Taegu	Daegu
광주	Kwangju	Gwangju	대전	Taejŏn	Daejeon
인천	Inch'on	Incheon	전주	Chonju	Jeonju
제주	Cheju	Jeju	청주	Ch'ŏngju	Cheongju
경주	Kyŏngju	Gyeongju	김포	Kimp'o	Gimpo
고구려	Koguryŏ	Goguryeo	동대구	Tongdaegu	Dongdaegu
부곡	Pugok	Bugok	정읍	Chŏngŏp	Jeongeup
울산	Ulsan	Ulsan	묵호	Muk'o	Mukho

*Korean Overseas Information Service. Retrieved Jan 12, 2006, from www.korea.net/korea/kor_loca.asp?code=A020303

otherwise known as Later Goguryeo. It was from Goryeo (Koryŏ in old spelling) that the modern name Korea emerged.

In the 13th century the Mongols, who also established the Yuan dynasty (1279–1368) in China, invaded Goryeo. Following the defeat of the Mongols in China by the Ming dynasty (1368–1644), Korea freed itself from Mongol domination. A general named Yi Seong-gye seized political and military power and established Joseon (1392–1910), also known as the Yi dynasty. This was the longest dynasty in Korean history. Yi moved the capital to Hanyang, present-day Seoul. Joseon society was deeply influenced by Confucianism. Under the rule of King Sejong the Great (1418–1450 reign), the Korean alphabet Hangeul was created, though Chinese remained the official written language and scholars continued to use it.

In the late 16th century, Korea under the Joseon dynasty suffered major Japanese invasions. Though combined Korean and Chinese forces defeated the Japanese, the warfare brought widespread devastation to the peninsula. In China the weakened Ming Empire was attacked and conquered by the Manchus, who established the Qing dynasty (1644–1911). Joseon enjoyed a period of peace thanks to its tributary relations with the Qing.

In the 19th century, China declined while Japan rose as a great regional power. In 1876 Japan forced an unequal treaty on Joseon, opening Korean ports to Japanese commerce and giving Japanese nationals extraterritorial rights. Emerging victorious from the Sino-Japanese War of 1894–1895 and the Russo-Japanese War of 1904–1905, Japan turned Korea into its colony in 1910.

While there were short periods of relative openness, the 35 years of Japanese occupation were mostly characterized by suppression of Korean culture, language and national identity. During World War II (1939–1945), Koreans were conscripted as labourers and soldiers for the Japanese Army.

Following the Japanese surrender on 15 August 1945, Korea was taken over by Allied forces. The United States and the Soviet Union agreed to divide the peninsula at the 38th parallel, a division that has lasted to this day. The Republic of Korea was established in the south on 15 August 1948 and the Democratic People's Republic of Korea was established in the north on 9 September 1948.

The Korean War broke out when North Korean troops crossed the 38th parallel in 1950. US-led United Nations forces (including over 20,000 Canadians) fought on the South Korean side; Chinese troops aided North Korea. With heavy casualties on both sides and great devastation wrought on the peninsula, a cease-fire agreement was signed in 1953.

Postwar South Korea had its first president by popular vote in 1952, but corruption in the government led to political instability and, eventually, to a military coup in 1961. While the political system remained oppressive, controlled largely by military leaders, the South Korean economy began to enjoy unprecedented growth in the 1960s. A high growth rate and rapid industrialization and urbanization between the 1960s and 1990s earned South Korea the reputation as one of the four "East Asian Tigers," along with Singapore, Hong Kong and Taiwan.

A pro-democracy movement spearheaded by student demonstrators finally forced the government to hold free elections in 1987. In 1992 Kim Young-sam became South Korea's first non-military president in 30 years. In 1997 Kim Dae-jung followed him in the first peaceful, democratic transition of power in Korean history. Kim Dae-jung pursued a policy of engagement toward North Korea, popularly known as the "Sunshine Policy." The current president, Roh Moo-hyun, was elected in 2002 and took office in February 2003. The next general election is scheduled for 2007.

ADMINISTRATION

South Korea is a republic governed by a directly elected president and a unicameral legislature, the National Assembly. The President, who serves a five-year term, is the head of state and commander-in-chief of the armed forces. He performs his executive functions through the State Council made up of 15 to 30 members. The Prime Minister, appointed by the President and approved by the National Assembly, supervises the administrative ministries and manages the Office for Government Policy Coordination under the direction of the President.

Gangwon, one of the nine South Korean provinces, twinned with Alberta in 1974, forming Alberta's oldest sister-province relationship.

The National Assembly has 299 members serving four-year terms. Its primary responsibility is to make the nation's laws. Other major functions include approving the national budget, declaring war, dispatching armed forces abroad and impeachment. The judiciary of Korea consists of three levels of courts: the Supreme Court, high courts and district courts.

Korea has a long tradition of strong, highly centralized governments. Though there has been some increase in local autonomy since 1995, when governors and mayors were elected by popular vote for the first time, local governments still function largely as local administrative divisions of the central government.

Currently there are 16 provincial-level governments—nine provinces (called *do*) and seven provincial-level metropolitan cities—and 235 lower-level local governments. Many Koreans identify themselves by the province in which they were born and raised.

Seoul—South Korea's capital—is the largest urban centre, with 10 million residents. The second largest city, Busan, has a population of over four million.

Local governments are similar in structure to the central government, so that a corresponding unit at the provincial and municipal levels can handle policies and programs directed by a central ministry.

TABLE 2. MAJOR ADMINISTRATIVE DIVISIONS

NINE PROVINCES	SEVEN METROPOLITAN CITIES
Gyeonggi	Seoul
Gangwon	Busan
Chungcheongbuk	Daegu
Chungcheongnam	Incheon
Jeollabuk	Gwangju
Jeollanam	Daejeon
Gyeongsangbuk	Ulsan
Gyeongsangnam	
Jeju	

The Korean national flag was first adopted in the late 19th century, although its design was not finalized until 1948. It features a white background with the *taegeuk* (great ultimate) in the centre and four trigrams at the corners. The white background signifies the purity of the Korean people and their peace-loving spirit. It may also be considered a reference to the "white-clad folk," a common epithet for the Koreans. The *taegeuk* is divided equally into the red upper section that represents yang and the blue lower section that represents yin. It is a symbol of cosmic forces that oppose and complement each other to achieve perfect harmony. The four trigrams, taken from the Chinese classic *I Ching* or *Book of Changes*, and representing heaven, earth, fire and water respectively, also carry the ideas of opposition and balance. As a whole, the flag symbolizes the ideal of the Korean people living in harmony with the universe.

NATIONAL FLAG OF THE REPUBLIC OF KOREA

As the Cold War ended, South Korea established diplomatic relations with the Soviet Union (1990) and China (1992). South and North Korea joined the United Nations simultaneously in September 1991. South Korea became the 29th member country of the Organization for Economic Cooperation and Development in 1996. As of 2005, it had diplomatic ties with 186 countries.

Relations with China play an increasingly important role in South Korean politics and economics. In spite of popular anti-American sentiments over the longstanding US military presence on the peninsula, South Korea and the United States have maintained their bilateral alliance under the Mutual Defense Treaty and remain close partners in political and economic areas.

Korea is Alberta's fifth-largest trading partner. Two-way Alberta-Korea trade neared $1 billion from 2001 to 2005.

(Alberta International and Intergovernmental Relations, 2006)

Canada established diplomatic relations with South Korea in 1963 and with North Korea in 2001. Since the 1980s, South Korea and Canada have enjoyed strong immigration and trade relations. South Korea is currently the world's 12th largest economy and ranks as Canada's third largest trading partner from the Pacific Rim region, behind China and Japan (Statistics Canada, 2006).

Koreans represent the second largest foreign student body in Alberta. In 2005, 343 people emigrated from South Korea to Alberta and accounted for 1.7 per cent of total immigration to Alberta. South Korea is the second largest source of business immigrants to Alberta.

(Alberta International and Intergovernmental Relations, 2006)

South Korea is a major source country of immigrants to Canada. These include large numbers of skilled immigrants with backgrounds in computer science and engineering as well as business immigrants. Along with China, South Korea led the tremendous increase in international student flow into Canada from 1995 to 2002.

Historical Education Overview

Koreans have long recognized the importance and value of education. The old saying "Don't even step on the shadow of your teacher" attests to the degree of respect for teachers in traditional Korean society. Korean education until the late Joseon dynasty was under profound Chinese influence, with the study of Chinese literature and philosophy forming most of the curriculum. The first Western-style schools were opened in the late 19th century.

Education is a national priority in South Korea. Since the early economic success of the 1970s, government expenditure on education has been generous.

EDUCATIONAL EXPEDITURES (2000) AS PERCENT OF GROSS DOMESTIC PRODUCT	
Korea	7.1 %
United States	7.0 %
Memeber nations of the OECD	7.0 %

Today South Koreans are among the most highly educated people in the world. The willingness of South Koreans to invest a great amount of resources in education is considered a major factor contributing to the country's phenomenal economic growth and social development in the past three to four decades.

PRE-1945

Formal education in Korea began in the Three Kingdoms period, when the first state-run institutions were set up to prepare aristocratic youth for government posts. Daehak (National Confucian Academy), established in the Goguryeo kingdom in 372, is considered the first Korean institution offering formal education. Other well-known institutions include Gukhak (National Confucian College) of the Silla kingdom, Gukjagam (National University) of the Goryeo dynasty, and Seonggyun-gwan (National Confucian Academy) of the Joseon dynasty.

The curriculum consisted mainly of Chinese classics of Confucian and Buddhist orientation, with an emphasis on cultivating the moral character of students. In addition to the central institutions, regional and private schools were also active during the Goryeo and Joseon dynasties. After the institutionalization of the civil service examination in the mid-10th century, a main goal of education was to prepare students to pass the examination, which would lead to social advancement. Women were excluded from all types of educational institutions and could receive only informal education at home.

In the 19th century Western-style education was introduced to Korea, known in the West as the "Hermit Kingdom." In 1882 King Gojong, in the face of growing Western influence, opened the doors of state-run schools to all Koreans regardless of their social class. In 1886 the government established what is generally considered Korea's first modern school, Yugyeong Gongwon, also called the Royal English School. It employed missionary teachers who taught in English with the help of interpreters. Subjects included English, mathematics, history, geography, natural science and political science. The schools set up by missionaries, such as Baejae School (1885) and Ewha Women's School (1886), played an important role in the development of modern education in Korea, introducing Western subjects and promoting female education. In an edict issued in 1895 King Gojong stressed the need for educational programs that would help preserve traditional values and achieve

national prosperity. In addition, in 1895, the civil service examination based on Confucian classics was abolished.

A number of modern schools such as elementary, teacher education, vocational and foreign language schools were set up at the turn of the century. These included some private schools established by Korean educators who strove to "save the nation through education." One of the first private higher education institutions in Korea was the Bosung Professional School, also known as Bosung College, which was founded in 1905 and has evolved into the present-day Korea University.

The development of modern education in Korea was disrupted during the Japanese occupation (1910–1945). The Japanese operated two educational systems: one for Japanese nationals and one for Koreans. The Japanese system offered advanced training in science and management, whereas the Korean system was devoted to literacy, basic technical skills and political indoctrination. Referred to as the national language in educational regulations, Japanese became the required medium of instruction in both public and private schools. In spite of the development of educational infrastructure, access to education remained limited for Koreans, with only 30 per cent of school-age children attending elementary school and one out of 20 enrolled in secondary school. Very few Koreans received higher education.

Keijo Imperial University, a state university modelled after Tokyo Imperial University, was established in Seoul in 1923, but the majority of its students were Japanese expatriates. As Japan pursued a policy of assimilation that aimed to turn Koreans into subjects of the Japanese emperor, the study of Korean language and history was removed from the curriculum.

When Japanese occupation ended in 1945, Korea had an underdeveloped school system, especially in secondary and higher education, and a critical shortage of education personnel, as the system had been predominately staffed by the Japanese at the administrative and supervisory levels.

1945–1990

The ending of Japanese occupation in 1945 and the founding of the republic in 1948 marked a turning point in educational development in Korea. Based on the American system, the 6-3-3-4 pattern was adopted:

- six years of primary education (elementary school, grades 1 to 6)
- three years of junior secondary education (middle school, grades 7 to 9)
- three years of senior secondary education (high school, grades 10 to 12)
- four years of higher education (college or university)

In spite of the destruction and economic hardship brought on by the Korean War (1950–1953), the country saw rapid growth in the educational sector. In the early years of the republic, emphasis was placed on providing equal educational opportunity. Six years of primary education was made compulsory in 1953. The adult literacy rate rose from about 20 per cent in 1945 to nearly 90 per cent in 1970.

The Ministry of Education (MOE) was established in November 1948 to take charge of educational policy, planning and administration. A highly centralized education system evolved, in which the MOE was responsible for administration of schools, allocation of resources, setting of enrolment quotas, certification of schools and teachers, curriculum development, as well as making policy decisions. Each province and major city had a seven-member board of education that administered primary and secondary education and other education-related activities within its jurisdiction.

In the 1960s the dramatic growth in student population made it a great challenge to maintain quality of education. Classrooms were crowded; school facilities and qualified teachers were in short supply. In 1960, the average number of students per teacher in elementary schools stood at 58.8.

The MOE launched several initiatives to revise the curriculum and improve methods of instruction. The 1968 Charter of National Education sought to strike a balance between tradition and development. In the same year the middle school entrance examination was abolished in an effort to move from an exam-centred education with fierce competition among students to a more balanced education that served both individual needs and national development goals.

A period of rapid modernization in the 1970s and 1980s gave education a vital role in providing skilled workers for economic development. The education tax of 1982 financed the expansion and modernization of school facilities and improved the socio-economic status of teachers. The government introduced more projects to improve the quality

of elementary and middle school programs through the revision of educational objectives, curriculum and teaching methods. Efforts were also made to raise the profile of vocational technical education, which was considered less desirable than a general education that led more easily to a college degree.

In the early 1970s the competitive entrance examination administered by individual high schools was abolished and replaced by a single qualifying examination. Instead of competing fiercely for a place in one of the more prestigious institutions, students had to pass the qualifying examination and were then assigned to a high school by lottery.

Higher education also underwent a period of growth, change and adjustment, with the establishment and strengthening of national public universities, regional universities and junior colleges. By 1990 over 500 higher education institutions had been established, up from 19 in 1945. Some general high schools upgraded to two-year colleges of education to train primary school teachers. Institutions training secondary school teachers upgraded to four-year teacher colleges.

New forms of education emerged such as radio and television broadcast and correspondence colleges, which provided the opportunity to receive higher education without having to attend regular classes. Some institutions piloted programs to strengthen professional training, with the aim of better preparing college students for a fast-changing industrial and technologically oriented society.

Competition for college entrance was fierce. To gain admission, high school students had to pass both a preliminary examination administered by the MOE and the entrance examination administered by individual institutions. In addition to spending five and a half days in school (including Saturday mornings), students had to work long hours on their homework and many studied with private tutors. Because of the pressure imposed on students, the expense incurred by families, and its perceived negative impact on the school system, the government banned private tutoring in 1980. In the following year, individual colleges and universities were no longer allowed to give their own entrance examinations. The MOE introduced the Scholastic Achievement Examination for College Entrance for all high school graduates wishing to attend college or university. Admission was based on the scores from this written test and high school records.

In 1985 a Commission for Educational Reform became a consultative body for the President. It proposed measures that aimed to "cultivate Koreans to lead the 21st century," such as reforming the college entrance system, upgrading school facilities, promoting science education, and increasing local and institutional autonomy.

1990 TO THE PRESENT

In the 1990s Korean education continued to focus on various quality issues. New laws for the promotion of local autonomy were introduced in 1991 and educational district offices were set up at the provincial level. In 1994 the Commission on Educational Reform for a New Korea submitted a proposal to increase the education budget, strengthen the international competitiveness of university education, and promote the autonomy and accountability of private schools. The following year the commission announced reform measures to establish the "New Education System" in preparation for the information age and globalization.

In 1998 the government established the Presidential Commission for the New Educational Community, an advisory agent to the President. Reviewing and assessing the progress of educational reform, the commission offered additional training and encouraged civic movements to support reform efforts. The commission carried out changes in schools and local communities by forming educational communities led by teachers, parents and citizens' associations and by promoting bottom-up educational reform based on student needs and available resources.

The national school curriculum is revised periodically to meet national and social needs. The latest curriculum (the seventh version) was introduced to primary students in 2000 and extended to the whole school system in 2004. The new curriculum attempts to break away from the traditional emphasis on rote learning by reducing study loads for each subject, allowing for more flexibility to meet individual student needs, and increasing self-directed learning activities. It consists of the Basic Common Curriculum that covers grades 1 to 10, and the Selected Curriculum that covers grades 11 and 12, when students have the opportunity to choose courses based on their own preferences.

In 2002, with the enrolment rate of elementary education at 100 per cent, three years of middle school education was made compulsory nationwide.

In order to offer a more liberal high school education and extend more autonomy to universities, a new system for the college admissions test—the College Scholastic Ability Test—was implemented in 1994. Although the test began by offering different tracks for students who wanted to pursue different areas of study, the varying tracks were eliminated in 2004.

In January 2001 the Ministry of Education was renamed the Ministry of Education and Human Resources Development (MOE & HRD) to establish, oversee, and coordinate human resources development policies at the national level, as well as formulate and implement educational policies. The Minister of Education and Human Resources Development is also a Deputy Prime Minister of the central government. The ministry provides financial assistance and guidance on basic policy matters. The financing of education remains centralized and government funding still constitutes the largest component of school budgets.

Since the Asian financial crisis in the late 1990s, the government has undertaken to reform higher education, perceived by many as a rigid system. Due to a dwindling pool of college-age students and a substantial increase in university capacities, more than 80 per cent of general high school graduates go on to college.

> The high school to post-secondary transition rate was 54 per cent in the province of Alberta in 2003–2004.
> (Alberta Education, 2006)

In 1998 the government launched the "Brain Korea 21" plan to raise the international standing of its universities. The program has so far resulted in a dramatic increase in publication of internationally recognized research papers and significant growth of scholarly exchange with overseas institutions.

In 2005 the government announced plans to cut the number of national universities from 50 to 35 and the number of students entering national universities by 10 per cent over the next two years. The government also wants to reduce the total number of private universities by 25 per cent, from

TABLE 3. ENROLMENT RATE IN SOUTH KOREA, 1970–2004*

EDUCATION YEAR	ELEMENTARY SCHOOL TO MIDDLE SCHOOL	MIDDLE SCHOOL TO HIGH SCHOOL	GENERAL HIGH SCHOOL TO HIGHER EDUCATION	VOCATIONAL HIGH SCHOOL TO HIGHER EDUCATION
1970	66.1	70.1	40.2	9.5
1975	77.2	74.7	41.5	8.8
1980	95.8	84.5	34.0	10.1
1985	99.2	90.7	53.8	13.3
1990	99.8	95.7	47.2	8.3
1995	99.9	98.4	72.7	19.1
1996	99.9	98.9	77.8	21.9
1997	99.9	99.4	81.4	29.1
1998	99.9	99.4	83.8	35.6
1999	99.9	99.4	84.5	38.5
2000	99.9	99.5	83.9	41.9
2001	99.9	99.6	85.3	44.9
2002	99.9	99.6	87.0	49.8
2003	99.9	99.7	90.1	57.6
2004	99.9	99.7	89.8	62.3

*MOE & HRD, *Education in Korea, 2005–2006.*

358 to 271, by 2009. The number will be reduced mainly through restructuring and mergers. The government will offer financial incentives to participating institutions. It also plans to appropriate funds for the creation of 15 world-class universities from amongst existing institutions.

In the past decade South Korea has gradually shifted its emphasis from sending students overseas to recruiting students from abroad. This strategy is designed to enhance the country's international competitiveness through the qualitative improvement of higher education.

Foreign students studying in Korea numbered over 11,000 in 2001 and about 17,000 in 2005. The government plans to increase the enrolment to 50,000 in the next five years through various initiatives.

These include recruiting overseas, promoting the "Study in Korea" project, increasing scholarships for foreign students, guaranteeing employment for foreign students after graduation, and establishing Korean high schools and cultural centres in China, the Philippines, Vietnam and other Asian countries.

FOREIGN STUDENTS STUDYING IN KOREA

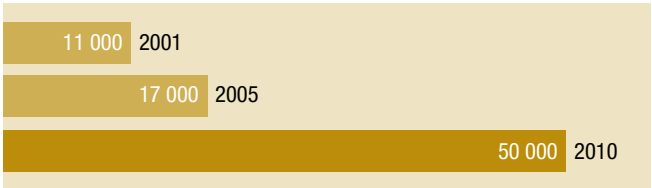


TABLE 4. EDUCATIONAL GROWTH IN SOUTH KOREA, 1945–2003*

PRIMARY SCHOOL EDUCATION									
Year	1945	1960	1970	1980	1990	2000	2001	2002	2003
Schools	2,834	4,496	5,961	6,487	6,335	5,267	5,322	5,384	5,464
Teachers	19,729	61,605	101,095	119,064	136,800	140,000	142,715	147,497	154,077
Students	1,366,685	3,622,685	5,749,301	5,658,002	4,868,520	4,019,991	4,089,429	4,138,366	4,175,731
MIDDLE SCHOOL EDUCATION									
Year	1945	1960	1970	1980	1990	2000	2001	2002	2003
Schools	166	1,053	1,608	2,121	2,470	2,731	2,770	2,809	2,865
Teachers	1,186	13,053	31,207	54,858	89,719	92,589	93,385	95,283	99,916
Students	80,828	528,593	1,318,808	2,471,997	2,275,751	1,860,539	1,831,152	1,841,030	1,859,265
HIGH SCHOOL EDUCATION									
Year	1945	1960	1970	1980	1990	2000	2001	2002	2003
Schools	307	640	889	1,353	1,683	1,957	1,969	1,995	2,095
Teachers	1,720	9,627	19,854	50,948	92,683	104,351	104,314	114,304	116,292
Students	40,271	273,434	590,382	1,696,792	2,283,806	2,071,468	1,911,173	1,795,509	1,787,541
HIGHER EDUCATION									
Year	1945	1960	1970	1980	1990	2000	2001	2002	2003
Schools	19	85	232	357	556	1,184	1,261	1,303	1,421
Teachers	1,490	3,808	10,435	20,900	41,920	79,136	83,116	86,441	63,823
Students	7,819	101,041	201,436	601,494	1,490,809	3,363,549	3,500,560	3,577,447	3,588,039

*MOE & HRD, *Education in Korea, 2005–2006.*

School Education

School education in South Korea takes twelve years.

- Elementary schools provide six years of primary education to children aged six or seven to 12.
- Middle schools offer three years of junior secondary education to those aged 13 to 15.
- High schools offer three years of senior secondary education to students aged 16 to 18.

High school graduates can apply to a junior college, college or university to receive higher education.

Six years of elementary school have been compulsory since 1953. Three years of middle school have been compulsory in rural areas since 1985 and throughout the country since 2002. Education is free at elementary and middle schools, but high schools charge tuition fees.

SCHOOL YEAR

Students attend class five and a half days a week. Each class session usually lasts 40 minutes in elementary schools, 45 minutes in middle schools and 50 minutes in high schools. Schools may adjust the length of each class session depending on weather and seasonal changes, individual school situations, student needs and the nature of the courses being offered.

GRADING SCALE

For Grade 1 and Grade 2 students, evaluation of curricular activities takes the form of descriptive sentences. In grades 3 to 12, a five-level grading scale (*Su, Wu, Mi, Yang, Ga*) predominates. The five-level scale corresponds to percentage scores as illustrated in Table 6. Schools may adjust the scale in view of the level of difficulty of the examinations. School transcripts usually include an explanation of the grading system.

TABLE 5. OUTLINE OF SCHOOL EDUCATION SYSTEM*

YEAR OF SCHOOLING							AGE
12	Secondary Education	General High School	Vocational High School	Trade High School		Special School	18
11							17
10							16
9		Middle School			Higher Civic School		15
8				Trade School			14
7							13
6	Elementary Education	Elementary School				Special School	12
5							11
4							10
3					Civic School		9
2							8
1							7
	Preschool Education		Kindergarten				6
							5
							4

*Based on chart from Korean Overseas Information Service, 2006.

KOREAN SCHOOL YEAR											
MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB
Semester 1					Summer Vacation	Semester 2				Winter Vacation	
17 weeks					45 days	17 weeks				70 days	
School year has a minimum of 220 instructional days											

TABLE 6. FIVE-LEVEL GRADING SCALE*

KOREAN GRADE	KOREAN (ROMANIZATION)	DESCRIPTOR	PERCENTAGE SCORE (%)	LETTER GRADE
수	*Su*	Outstanding	Above 90	A
우	*Wu*	Excellent	80–90	B
미	*Mi*	Average	70–80	C
양	*Yang*	Below average	60–70	D
가	*Ga*	Poor	Below 60	F

*Percentage score conversion based on Pak, 1997.

ADMINISTRATION

Education administration in South Korea operates at three main levels:

- the national MOE & HRD
- provincial and metropolitan boards of education
- county-level district boards of education

The MOE & HRD plans and coordinates national education policies, formulates school curricula, publishes and approves school textbooks, provides administrative and financial support for all levels of schools, supervises and supports provincial and local educational authorities and operates the teacher training system. Provincial and county boards of education administer primary and secondary education in local areas by approving major decisions on programs and extracurricular activities. Each board has seven to 15 council members, elected from local school committees.

The MOE & HRD periodically updates national curricula for primary, middle and high schools, which serve as the basis for textbook development. The first national curriculum was published in 1954. A new version of the national curriculum is usually announced well in advance of its implementation, to allow for the training of teachers and preparation of textbooks and other materials. For example, the seventh revision of the curriculum, published in 1997, was introduced to students in grades 1 and 2 in 2000 and to Grade 12 students in 2004 (see Table 7).

PRESCHOOL EDUCATION (AGES 4 TO 6)

Provided to children aged four to six, preschool education is optional and not considered part of the formal school system. Private kindergartens established by religious groups and other organizations formerly played a major role in preschool education. Since the mid-1970s public kindergartens have increased in number and importance.

For the past 15 years, the published enrolment rate has stabilized at around 30 per cent. The actual rate is much higher since many small private services are excluded from official statistics. In recent years the MOE & HRD has introduced policies to increase the availability of kindergarten education, providing tuition waivers or subsidies to low-income families. In 2004, 546,531 children attended 4,281 public kindergartens and 4,008 private kindergartens (MOE & HRD, 2006).

CURRICULUM

First published in 1969, the national kindergarten curriculum aims to promote the total development of children through varied and enjoyable activities. It prescribes five life domains: health, society, expression, language and exploration. Kindergarten teachers are trained at junior colleges, colleges and the Korean National Open University.

ELEMENTARY SCHOOLS (GRADES 1 TO 6)

According to the Education Act, elementary school education helps students acquire basic abilities, skills and habits that are essential for learning and daily life. Six years

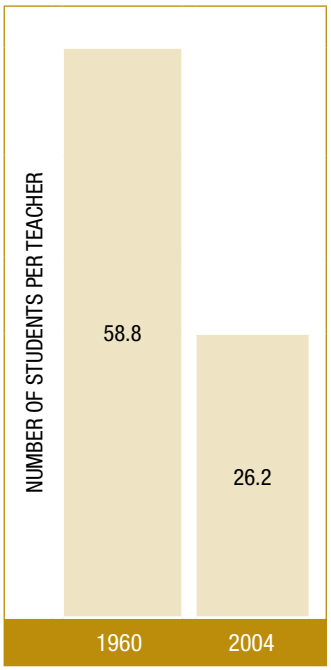
TABLE 7. TIMEFRAME FOR DEVELOPMENT AND IMPLEMENTATION OF THE 7TH NATIONAL CURRICULUM*

LEVEL	YEAR						
	1996	1997	2000	2001	2002	2003	2004
Elementary School	Research and development of a new curriculum	Announcement of the 7th national curriculum	Grade 1 Grade 2	Grade 3 Grade 4	Grade 5 Grade 6		
Middle School				Grade 7	Grade 8	Grade 9	
High School					Grade 10	Grade 11	Grade 12

*MOE & HRD, September 2004.

of elementary school are compulsory and free, with an enrolment rate of nearly 100 per cent. Students usually start school at age six or seven.

The early attendance system introduced in 1996 allows five-year-olds considered ready for primary education to enrol if space is available. The percentage of five-year-olds admitted into elementary schools ranges from five to 20 per cent, depending on the province. The student to teacher ratio in elementary schools dropped from 58.8 in 1960 to 26.2 in 2004. An elementary school teacher requires four years of study at a university of education or a college or university teacher education program.



Most elementary schools are public. As of 2004, there were:

- 17 national elementary schools
- 5,449 public elementary schools operated at the provincial and county levels
- 75 private elementary schools

Before the advent of universal primary education, a number of civic schools offered three-year literacy programs for adults or financially underprivileged students. As of 2006, only one civic school remains in operation.

CURRICULUM

In the national basic curriculum (see Table 8), elementary school education requires 25 to 32 class hours of study per week, with 34 school weeks per year. (Grade 1 students attend only 30 school weeks per year.) Each class hour is 40 minutes. Each school year has a total of 830 to 1,088 class hours, depending on the grade.

The language of instruction is Korean. Since 1997, English has been taught as part of the regular curriculum for one class hour per week in grades 3 and 4 and two class hours per week in grades 5 and 6.

TABLE 8. NATIONAL BASIC CURRICULUM, ELEMENTARY SCHOOL*

MINIMUM ANNUAL CLASS HOURS[1]							
SUBJECT	GRADE	ELEMENTARY SCHOOL					
		1	2	3	4	5	6
Ten Subjects	Korean Language Arts	210	238	238	204	204	204
	Ethics	60	68	34	34	34	34
	Social Studies			102	102	102	102
	Mathematics	120	136	136	136	136	136
	Science	Wise Living 90	Wise Living 102	102	120	102	102
	Practical Skills	Pleasant Living 180	Pleasant Living 204	-	-	68	68
	Physical Education			102	102	102	102
	Music	We are 1st Graders 80[2]		68	68	68	68
	Arts			68	68	68	68
	Foreign Language (English)			34	34	68	68
Optional Activities		60	68	68	68	68	68
Extracurricular Activities		30	34	34	68	68	68
Annual Class Time		830	850	986	986	1,088	1,088

Notes:

(1) This table indicates the minimum number of class hours by subject. (2) The "We are First Graders" class is taught in March only.
*MOE & HRD: *Education in Korea, 2005–2006.*

Elementary School

Comparison of annual instructional hours

- Students in South Korea receive 830 to 1,088 hours
- Students in Alberta receive 950 hours

There are ten mandatory subjects:

1. Korean Language Arts
2. Ethics
3. Social Studies
4. Mathematics
5. Science
6. Practical Skills
7. Physical Education
8. Music
9. Arts
10. Foreign Language—English

In grades 1 and 2, subject matters are integrated into six and five areas respectively, including:

- Korean Language Arts
- Mathematics
- Ethics (or Disciplined Life)
- Wise Living (or Intelligent Life)
- Pleasant Living (or Pleasant Life)
- "We Are First Graders" (taught in March of Grade 1)

OPTIONAL ACTIVITIES

The optional activities prescribed in the national curriculum include "creative optional activities," involving self-directed study, and "subject matter optional activities," involving in-depth or supplementary study of basic courses or the study of electives. In elementary schools, emphasis is placed on creative optional activities to foster self-directed learning ability rather than in-depth subject matter studies.

MIDDLE SCHOOLS (GRADES 7 TO 9)

Elementary school graduates go on to attend three years of middle school. According to the Education Act, middle school education helps students acquire basic abilities and skills that are essential for learning, daily life and democratic citizenship on the basis of elementary school education.

Middle school education became free and compulsory in rural areas in 1985 and all across the country in 2002. The competitive entrance examination was abolished in 1969 to eliminate the distinction between schools perceived to be of superior or inferior quality and provide equal access to middle school education. Since then, elementary school graduates have been allocated to middle schools in their residential districts by lottery. Enrolment rate is nearly 100 per cent.

Students are taught in mixed-ability classes, as differentiation of pupils by ability is forbidden. The student to teacher ratio in middle schools dropped from 42.3 in 1970 to 19 in 2004. A middle school teacher requires four years of study at a university of education or a college or university teacher-education program.

Most middle schools are public. As of 2004, there were nine national middle schools, 2,217 public middle schools operated at the provincial and county levels, and 662 private middle schools. In addition, "higher civic schools" provide up to three years of middle school education for adult students. Four higher civic schools remain in operation.

CURRICULUM

In the national basic curriculum (see Table 9), middle school education requires 34 class hours of study per week, with 34 school weeks per year. Each class hour is 45 minutes. Students have a total of 1,156 class hours per school year.

The language of instruction is Korean.

Middle School

Comparison of annual instructional hours

- Students in South Korea receive 1,156 hours
- Students in Alberta receive 950 hours

There are ten mandatory subjects:

1. Korean Language Arts
2. Ethics
3. Social Studies
4. Mathematics
5. Science
6. Practical Skills—Technology and Home Economics
7. Physical Education
8. Music
9. Arts
10. Foreign Language—English

OPTIONAL ACTIVITIES

The 136 class hours of optional activities include 34 hours of creative activities and 102 hours for further subject matter study, which generally focuses on elective courses such as Chinese Characters and Classics, Computer Science, Environmental Studies and Practical Foreign Language (German, French, Spanish, Chinese, Japanese, Russian or Arabic).

TABLE 9. NATIONAL BASIC CURRICULUM, MIDDLE SCHOOL*

MINIMUM ANNUAL CLASS HOURS				
		MIDDLE SCHOOL		
SUBJECT	GRADE	7	8	9
Ten Subjects	Korean Language Arts	170	136	136
	Ethics	68	68	34
	Social Studies	102	102	136
	Mathematics	136	136	102
	Science	102	136	136
	Practical Skills	Technology and/or Home Economics		
		68	102	102
	Physical Education	102	102	68
	Music	68	34	34
	Arts	34	34	68
	Foreign Language (English)	102	102	136
Optional Activities		136	136	136
Extracurricular Activities		68	68	68
Annual Class Time		1,156	1,156	1,156

* MOE & HRD: *Education in Korea, 2005–2006.*

Regular examinations are administered twice per school term (mid-term and final), or four times per year, for each subject. Final grades are usually recorded for each school year. Upon successful completion of the program, students receive a Middle School Diploma *(Chung Hakkyo Choeupchang)*. Since academically gifted students are allowed to skip a grade twice during elementary and middle school, a student may graduate from middle school at age 13.

HIGH SCHOOLS (GRADES 10 TO 12)

High schools provide three years of general and specialized education following middle school education. According to the Education Act, high school education helps students acquire abilities and skills that are essential for progressing along their chosen careers and becoming world citizens. Middle school graduates or those with equivalent educational background may enter high schools.

Both public and private schools must follow the national curriculum. Private high schools account for about half the student enrolment. In 2004, the enrolment rate was 99.7 per cent.

Unlike elementary and middle schools, high schools charge tuition fees. While school fees are standardized for both public and private schools across the country, since 1998 private schools without government funding have been allowed to set their own fees.

TABLE 10. HIGH SCHOOL AND STUDENT NUMBERS, 2004*

SCHOOL		NUMBER OF SCHOOLS		NUMBER OF STUDENTS	
		BY CATEGORY	TOTAL	BY CATEGORY	TOTAL
General High School	National	12	1,351	8,884	1,232,010
	Public	704		596,551	
	Private	635		626,575	
Vocational High School	National	5	729	5,854	514,550
	Public	420		256,732	
	Private	304		251,964	
Air and Correspondence High School	Public	39	39	12,598	12,598
	Private	0		0	
Trade High School	Public	0	14	0	3,457
	Private	14		3,457	

*MOE & HRD, 2004.

High schools are divided into two main categories:

- general academic high schools
- vocational high schools

General high schools include a small number of special purpose high schools in science, foreign language, arts and physical education, which admit top-performing middle school graduates with particular ability in certain fields. Students admitted into such schools may receive a scholarship for tuition and accommodation.

Some science schools offer an accelerated route to university entrance, with students gaining admission to bachelor's degree programs at the Korea Advanced Institute of Science and Technology or other university science programs after two years of high school. Radio and television broadcast and correspondence high schools provide general high school education in a non-traditional format, with students attending classes on Sunday.

Vocational high schools include general vocational high schools and those specializing in agriculture, commerce, fishery and technology or industry. The curriculum at vocational high schools consists of 40 to 60 per cent general courses and the remainder, vocational courses. A few trade high schools offer highly specialized vocational training. In addition, a limited number of comprehensive vocational schools offer both general and vocational training.

ADMISSION

The method of admission is complex and has undergone several changes over the years. The competitive entrance examination for the more prestigious high schools was abolished in 1973 and replaced with a qualifying or screening examination. After passing the qualifying examination, students were assigned by lottery to general high schools in their residential districts. The small percentage of students who failed the qualifying examination could seek employment or pursue further study through adult education programs.

Applicants to vocational high schools could choose their own schools. After passing the qualifying examination, they were admitted on the basis of a school-administered entrance examination, middle school records or a combination of both. Those who failed to get into the vocational high school of their choice could have their names re-entered into the lottery system for general high schools.

Since the revision of the Education Act in 1995, high schools have gained more autonomy in recruiting students. Currently schools in metropolitan cities such as Seoul, Busan, Daegu and Gwangju (the so-called equalization areas) use the computer lottery system. Schools in the non-equalization areas admit students based on a combination of their entrance examination scores and middle school records.

CURRICULUM

As in elementary and middle schools, the highly structured national curriculum also prescribes the content and time allocation for subjects in high schools. The sixth revision of the curriculum was first implemented in high schools in 1996 and the seventh revision in 2002.

In the newer curriculum, the trend shifts from a heavily knowledge-based curriculum to one that encourages the development of creativity and problem-solving skills and gives more power and freedom to local authorities and schools. Because of fierce competition to get into the prestigious higher education institutions, teaching in general high schools still tends to focus on preparing students for university.

Schools keep detailed student achievement records, which are used in addition to examination results for university admissions.

GRADUATION REQUIREMENTS

Regular examinations are administered twice per school term (mid-term and final) or four times per year for each subject. Other examinations may be conducted for some subjects as decided by the school principal. Final grades are usually recorded for each school term.

To graduate, students in both general and vocational high schools must complete at least 216 units of study, including classroom instruction and optional and extracurricular activities (see Table 11). One unit consists of one class hour per week over a 17-week semester. Altogether, South Korean

In South Korea:

total hours = 216 (units) x 17 (class hours/unit) x 50/60 (instructional hours/class hour) = 3,060

In Alberta:

total hours = 100 (credits) x 25 (hours/credit) = 2,500

TABLE 11. GRADE 10 UNIT REQUIREMENTS

COMPONENT		UNIT	TOTAL
Basic Common Subjects		56	56
Optional Activities	Supplementary study of basic subjects	4–6	12
	Elective subjects	4–6	
	Creative activities	2	
Extracurricular activities		4	4
Grand Total			72

students must complete a minimum of 3,060 instructional hours, compared with a minimum of 2,500 instructional hours required for high school graduation in Alberta.

In Grade 10, students complete:

- 56 units of national basic common subjects
- 12 units of optional activities
- four units of extracurricular activities

Of the 12 optional units, four to six units are allocated to supplementary study of basic common subjects, four to six units to elective subjects, and two units, if available, to creative optional activities. If necessary, schools may allocate more than four units of extracurricular activities.

GENERAL HIGH SCHOOLS

In grades 11 and 12, students choose one of three optional tracks:

- humanities and social studies
- science
- vocational studies

Students must complete 136 units of elective subjects (general or advanced subjects) plus eight units of extracurricular activities. To ensure balanced course distribution, elective courses are divided into five groups. Each student must take at least two courses from the group of "general studies" and at least one course from each of the other four groups. Students may be exempt from taking a general elective course in the group they want to study intensively.

For example, students on the humanities track usually take a general science course, while those on the science track take separate advanced courses in physics, chemistry, biology and earth science. Similarly, students on the science track may take general social studies units, while those on the humanities track take advanced courses in geography, history, politics and culture.

All students must study two modern foreign languages: English and a second foreign language chosen from German, French, Spanish, Chinese, Japanese, Russian and Arabic.

Upon graduation, students of general high schools receive the General High School Diploma *(Immumgye Kodung Hakkyo Choeupchang)*, often translated as a high school Certificate of Graduation. Those who want to pursue higher education take the College Scholastic Ability Test, which is used in combination with student records and other data to determine university admission.

VOCATIONAL HIGH SCHOOLS

In vocational high schools, students spend about half their time on general courses and the other half on vocational courses. Depending on their field of specialization, they may take advanced courses in agriculture, technology or industry, commerce, fishery and marine transportation, for example. Schools must offer at least 82 units of general elective courses, of which 56 must be from the national basic common subjects.

There is an emphasis on practical experience and cooperation with industry. Grade 12 students take field study courses for six to 12 months, an extension of the three to six month period required before 1994. Schools that offer field study courses for one year (known as the 2+1 system) may adjust the total number of units in general and specialized subjects with the approval of metropolitan or provincial authorities.

Upon graduation, students receive the Vocational High School Diploma *(Silopgye Kodung Hakkyo Choeupchang)*, often translated as a vocational high school Certificate of Graduation. They may seek employment or go to college. Many who pursue further study choose junior colleges instead of four-year colleges or universities. For more information on vocational high schools, refer to the chapter on Vocational and Technical Education.

TABLE 12. NATIONAL HIGH SCHOOL CURRICULUM*

COURSE GROUPS	SUBJECT AREAS	GRADE 10	GRADES 11 AND 12	
		BASIC SUBJECTS	GENERAL SUBJECTS	ADVANCED SUBJECTS
Humanities and Social Sciences	Korean Language Arts	Korean Language Arts (8)	Korean Language Arts (4)	Speech (4) Reading (8) Writing (8) Grammar (4) Literature (8)
	Ethics	Ethics (2)	Civil Ethics (4)	Ethics and Ideology (4) Traditional Ethics (4)
	Social Studies	Social Studies (6) Korean History (4)	Human Society and the Environment (4)	Korean Geography (8) World Geography (8) Economic Geography (6) Korean Modern History (8) World History (8) Law and Society (6) Politics (8) Economics (6) Society and Culture (8)

TABLE 12. NATIONAL HIGH SCHOOL CURRICULUM* (Continued)

COURSE GROUPS	SUBJECT AREAS	GRADE 10	GRADES 11 AND 12	
		BASIC SUBJECTS	GENERAL SUBJECTS	ADVANCED SUBJECTS
Science and Technology	Math	Math (8)	Math Application (4)	Math I (8) Math II (8) Differential and Integral Calculus (4) Probability and Statistics (4) Discrete Mathematics (4)
	Science	Science (6)	Science and Life (4)	Physics I (8) Chemistry I (4) Biology I (4) Earth Science I (4) Physics II (6) Chemistry II (6) Biology II (6) Earth Science II (6)
	Technology and Home Economics	Technology and Home Economics (6)	Information Society and Computers (4)	Agricultural Science (6) Industrial Technology (6) Enterprise Management (6) Ocean Science (6) Home Science (6)
Arts and Physical Education	Physical Education	Physical Education (4)	Physical Education and Health (4)	Physical Education Theory (4) Physical Education Performance (≥ 4)
	Music	Music (2)	Music and Life (4)	Music Theory (4) Music Performance (≥ 4)
	Arts	Arts (2)	Arts and Life (4)	Art Theory (4) Art Performance (≥ 4)

TABLE 12. NATIONAL HIGH SCHOOL CURRICULUM* (Continued)

COURSE GROUPS	SUBJECT AREAS	GRADE 10	GRADES 11 AND 12	
		BASIC SUBJECTS	GENERAL SUBJECTS	ADVANCED SUBJECTS
Foreign Language	Foreign Language	English (8)	German I (6) French I (6) Spanish I (6) Chinese I (6) Japanese I (6) Russian I (6) Arabic I (6)	English I (8) English II (8) English Conversation (8) English Reading (8) English Writing (8) German II (6) French II (6) Spanish II (6) Chinese II (6) Japanese II (6) Russian II (6) Arabic II (6)
General Studies	Chinese Characters		Chinese Characters (6)	Chinese Classics (6)
	Military Training		Military Training (6)	
	Liberal Arts		Philosophy (4) Logic (4) Psychology (4) Pedagogy (4) Economics and Life (4) Religion (4) Ecology and Environment (4) Career and Vocation (4) Others (4)	
SUBTOTAL		56	≥ 24	≤ 112
Optional Activities		12		
Extracurricular Activities		4	8	
Total		216		

Notes:

(1) The curriculum applies to both general and vocational high schools. This table, however, does not list the vocational advanced subjects.

(2) The standard number of units for each general elective course may be extended or reduced by two units. Four-unit courses, however, cannot be reduced.

(3) Students are generally required to complete advanced elective course I before taking course II. The school may substitute or exempt the level I course.

*Based on national high school optional curriculum, seventh revision, published by MOE & HRD. The table lists only general courses and does not include all the advanced subjects.

Retrieved Feb 28, 2006, from http://english.moe.go.kr/html/education/?menuno=04

Higher Education

Higher education in Korea can be traced back to the fourth century, with the establishment of *Daehak* (National Confucian Academy) in the Goguryeo kingdom in 372. Modern higher education in the European tradition originated in the late 19th century, in the form of missionary schools that introduced Western subjects and vocational schools geared toward the need for a modern technological society.

At the founding of South Korea in 1948, the country had 19 higher education institutions with a total enrolment of less than 8,000. In 2004, there were 383 higher education institutions offering programs that confer diplomas and bachelor's, master's and doctoral degrees to 3.3 million students. Over 80 per cent of Korean higher education institutions are private.

Considered public instruments of the state, educational institutions in Korea must meet certain standards established by law and various presidential and ministerial decrees. All higher education institutions, whether national, public, or private, come under the supervision of the MOE & HRD, which exercises control over such matters as student quotas, qualifications of teaching staff, curricula and degree requirements. Government authorities approve the establishment of any institution. All institutions must submit, upon request, reports of all aspects of their operations and are subject to government audits.

FUNDING

Funding for higher education comes from tuition and fees, government aid, grants, research contracts and endowments. Student tuition and fees constitute a large portion of funding for all institutions. Most government funding goes to national and public institutions, while limited government grants and loans have gone to private institutions since 1990.

ACADEMIC YEAR

The academic year has two semesters over a minimum of 32 weeks. The first semester runs from March to August, including the summer vacation. The second semester runs from September to February, including the winter vacation.

The unit for measuring the completion of each course is the credit or credit hour: one credit refers to one instructional hour per week over a 16-week semester for ordinary subjects or two instructional hours per week for lab courses.

Each institution oversees:

- the requirements for the completion of each credit
- the minimum credits necessary for graduation
- the standard credits and maximum credits required to be taken each semester
- the method to obtain special credits
- credits required for the completion of preparatory courses

TYPES OF INSTITUTIONS

Currently there are nine major categories of higher education institutions:

1. colleges and universities
2. industrial universities
3. universities of education
4. junior colleges
5. air and correspondence university (open university)
6. technical colleges
7. miscellaneous institutions
8. cyber universities
9. graduate schools

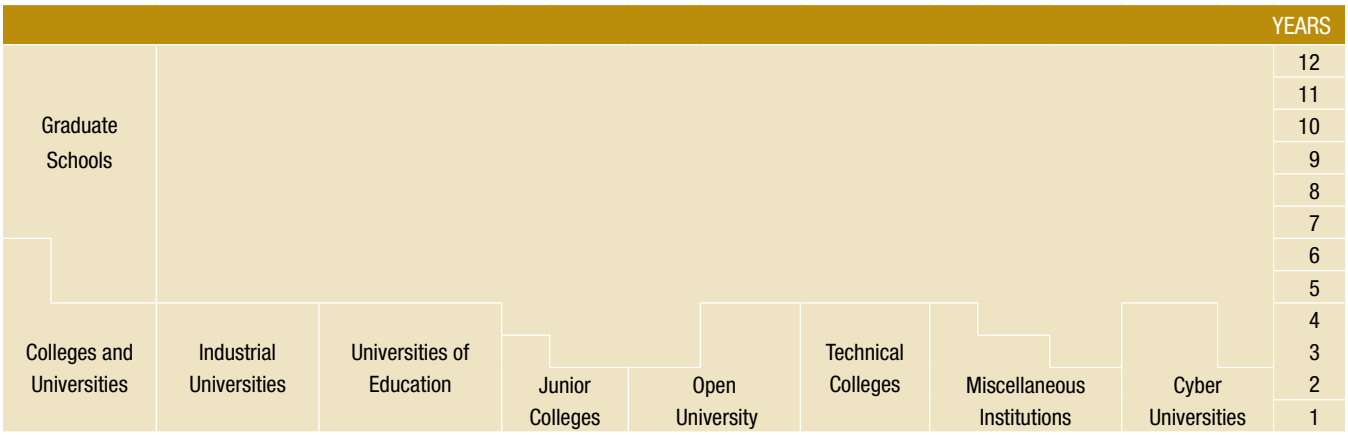
COLLEGES AND UNIVERSITIES
(BACHELOR'S DEGREES)

Colleges and universities offer four-year undergraduate programs leading to bachelor's degrees. Programs in medicine, Oriental medicine, dentistry and recent programs of veterinary medicine take six years to complete. Most institutions have graduate schools offering master's and doctoral degree programs. In 2004 there were a total of 171 four-year colleges and universities—24 national, two public and 145 private.

Inaugurated in 1982, the Korean Council for University Education includes all four-year colleges and universities. Its professed aim is to "enhance autonomy and accountability in the management of higher education, and to promote healthy development through inter-institutional cooperation." It plays an important role in education research and university cooperation and serves as an intermediary between the MOE & HRD and individual institutions.

Since 1992 KCUE has been responsible for the evaluation and accreditation of educational programs in all four-year colleges and universities, conducting assessments at departmental and institutional levels. Its website (www.kcue.or.kr/english/) provides an updated list of member institutions.

TABLE 13. CATEGORIES OF HIGHER EDUCATION INSTITUTIONS*



*Adapted from chart provided by Korean Overseas Information Service. Retrieved Feb 15, 2006, from www.korea.net/korea/kor_loca.asp?code=F0202

INDUSTRIAL UNIVERSITIES
(DIPLOMAS/ASSOCIATE DEGREES AND BACHELOR'S DEGREES)

Also known as polytechnics, the industrial universities were first established in 1982 to provide an alternative route to higher education for people already in the workforce and to encourage cooperation between educational institutions and industry. They offer both diplomas and four-year undergraduate programs that lead to bachelor's degrees. In 2004, there were 18 industrial universities—eight national and 10 private.

To be admitted, applicants must have a high school diploma and at least one year of work experience. Industrial universities are often called open universities, as there is no entrance examination. Tuition fees are typically lower than those at regular four-year colleges and universities.

UNIVERSITIES OF EDUCATION
(BACHELOR'S DEGREES)

Formerly known as teachers' colleges, the universities of education are funded nationally and distributed across the country by province and major city. As of 2004, there were 11 national universities of education. They used to offer two-year programs, but in 1984 were upgraded to four-year institutions awarding bachelor's degrees. Graduates can be certified to teach in elementary schools.

Pre-service education of secondary school teachers takes place in colleges of education of general universities. For more information, refer to the chapter on Teacher Education.

JUNIOR COLLEGES
(DIPLOMAS AND ASSOCIATE DEGREES)

Junior colleges, also known as junior vocational colleges, offer post-secondary programs in liberal arts, kindergarten education, commerce, technology, engineering, agriculture, fisheries and nursing, among others. The majority of the programs are two years in length. A few specialties including nursing, mechanics and fisheries require three years of study. The most popular fields are technology, engineering and nursing.

Junior college graduates may seek employment or transfer to four-year colleges and universities for further study. In 2004, there were 158 junior colleges—seven national, eight public and 143 private.

The predecessors of today's junior colleges were vocational high schools established in the early 1960s to train mid-level technical workers. These vocational high schools offered five-year programs comprising three years of high school courses and two years of vocational courses. The current structure of two-year junior colleges was set up in 1979.

Since 1995, junior colleges have been allowed to delete the word "junior" from their school names. In 1997, they were granted the right to award associate degrees.

OPEN UNIVERSITY (AIR AND CORRESPONDENCE UNIVERSITY)
(DIPLOMAS, ASSOCIATE DEGREES AND BACHELOR'S DEGREES)

There is only one "air and correspondence university"—the Korean National Open University. Founded in 1972 as Korean Air and Correspondence College, it was a junior college affiliated with Seoul National University. In 1981 it began offering five-year bachelor's degree programs. These

were subsequently changed to four-year courses in 1991. It became an independent institution in 1982 and was renamed in 1993.

The four colleges of KNOU offer undergraduate courses in liberal arts, social sciences, natural sciences and education. Since 2001 it has offered master's courses in business administration, public administration, computer science and lifelong education through its graduate school.

KNOU admits students through its 12 regional study centres and offers educational programs through diverse channels such as radio, TV, video conferencing and the Internet. In-class components of the programs are delivered during the summer and winter vacations through its affiliated institutions.

After completing a minimum of 70 credits, students may qualify as having completed a two-year junior college program. After completing a minimum of 140 credits, including a graduation thesis, students receive a Bachelor of Arts or Bachelor of Science degree.

TECHNICAL COLLEGES
(BACHELOR'S DEGREES)

To meet the need for continuing education among people employed in professional and technical fields, technical colleges—also called colleges of technology—were established for the education and training of company employees. The institutions were authorized to offer two-year or four-year programs and award bachelor's degrees. This category of institution is being phased out; only one private technical college was operating in 2004.

MISCELLANEOUS INSTITUTIONS
(TWO-YEAR AND FOUR-YEAR DIPLOMAS)

Miscellaneous institutions offer highly specialized programs such as religious studies. In 2004 there were five miscellaneous higher education institutions, all private. Four of them offer four-year undergraduate programs and one offers two-year junior college programs.

Graduates from four-year programs receive diplomas that are considered equivalent to a bachelor's degree and may be accepted into graduate programs at other colleges and universities.

CYBER UNIVERSITIES
(ASSOCIATE DEGREES AND BACHELOR'S DEGREES)

In recent years a new type of institution has emerged: the so-called cyber university, which offers programs mainly over the Internet. As of 2004, there were 17 cyber universities licensed by the government, all of them private. They offer two associate degree programs and 15 bachelor's degree programs.

GRADUATE SCHOOLS
(MASTER'S AND DOCTORAL DEGREES)

Graduate schools may be independent institutions or may be affiliated with four-year colleges or universities, industrial universities, universities of education or the Korean National Open University. They are generally classified as professional, general and open graduate schools.

- Professional graduate schools confer professional master's degrees in areas such as education, business administration and public administration.

TABLE 14. CYBER UNIVERSITIES*

NAME	ADDRESS	NAME	ADDRESS
Busan Digital University	www.bdu.ac.kr	Open Cyber University	www.ocu.ac.kr
Cyber University of Foreign Studies	www.cufs.ac.kr	Sejong Cyber University	www.cybersejong.ac.kr
Daegu Cyber University	www.dcu.ac.kr	Semin Digital University	www.smc.ac.kr
Gukje Cyber University	www.gdu.ac.kr	Seoul Cyber University	www.iscu.ac.kr
Hansung Digital University	www.hsdu.ac.kr	Seoul Digital University	www.sdu.ac.kr
Hanyang Cyber University	www.hanyangcyber.ac.kr	Wongwang Digital University	www.wdu.ac.kr
Korea Cyber University	www.kcu.or.kr	World Cyber University	www.world.ac.kr
Korea Digital University	www.koreadu.ac.kr	Youngjin Cyber University	www.ycc.ac.kr
Kyunghee Cyber University	www.khcu.ac.kr		

*MOE & HRD. Retrieved Apr 21, 2006, from http://english.moe.go.kr/html/education/?menuno=07

- General graduate schools offer programs in academic disciplines and award Master of Arts, Master of Science and doctoral degrees.
- Open graduate schools belong to industrial universities, which have an open admissions policy with no entrance examinations.

In 2004, there were 1,077 graduate schools within colleges and universities:

- 122 national, 14 public and 941 private
- 311 independent graduate schools—all private

ALTERNATIVE ROUTES
(DIPLOMAS, ASSOCIATE DEGREES AND BACHELOR'S DEGREES)

The government also operates two alternative routes for people to obtain recognized higher education credentials. One is the Bachelor's Examination System, which enables students to earn bachelor's degrees by passing a series of tests. The other is the Credit Bank System managed by the Korean Education Development Institute, a government-funded research body. The CBS allows students to take courses in any accredited program and apply them towards a diploma, associate degree or bachelor's degree.

RELATIVE STANDING OF INSTITUTIONS

South Korean higher education is hierarchical, with great disparity among various institutions in terms of funding, education quality, faculty qualifications, resources and facilities. In general, public institutions are better funded than private ones, though there are a number of well-funded, very prestigious private universities.

Traditionally, Seoul National University, Korea University and Yonsei University, collectively known as the "SKY schools," are considered the top three universities in South Korea. Based on various ranking systems, the following may be considered among the best South Korean universities:

- Seoul National University
- Yonsei University
- Korea Advanced Institute of Science and Technology
- Pohan University of Science and Technology
- Sungkyunkwan University
- Hanyang University
- Korea University
- Kyungpook National University
- Ewha Women's University
- Sogang University

For further information about the relative standing of South Korean institutions, consult *Country Education Profiles: Korea* published by the National Office of Overseas Skills Recognition (NOOSR) of Australia. It classifies the institutions into different sections based on their perceived quality of education.

ADMISSIONS

Colleges and universities in South Korea operate under strict enrolment limits. There used to be many repeat applicants due to the gap between admission quotas and the number of applicants. In recent years the number of repeat applicants has declined thanks to the expansion of the higher education system. Nearly 90 per cent of general high school graduates achieved college or university entrance in 2004. Competition for university entrance, however, remains fierce as students vie for coveted spots in the prestigious institutions.

The higher education admission policy has changed many times over the years. Initially, institutions designed their own tests to admit students. This was problematic as some institutions did not maintain rigorous standards for admission. In 1954 the government introduced a national qualifying exam. In the late 1960s and throughout the 1970s, high school graduates seeking admission to higher education had to pass both a preliminary examination administered by the Ministry of Education and the entrance examinations administered by individual institutions.

In 1981 the government introduced the Scholastic Achievement Examination for College Entrance—otherwise known as the College Scholastic Achievement Test—to measure students' mastery of high school subjects. Institution-administered entrance examinations were abolished. Admission was based on SAECE scores and high school records, which accounted for 70 and 30 per cent of the total score respectively. In subsequent years the SAECE was revised several times: the number of subjects were reduced from 17 to nine in 1988; institutions could apply more weight to certain sections of the exam based on the applicant's proposed field of study.

Since 1994, institutions have generally used the following admission criteria:

- comprehensive high school records—at least 40 per cent
- College Scholastic Ability Test and/or institution-administered exams—up to 60 per cent

While the government requires that high school records account for at least 40 per cent of the total score, both the CSAT and institution-administered entrance exams are optional. Institutions can decide whether to use CSAT either exclusively or in combination with their own entrance exams. The exams administered by national and public institutions cannot be based on the core subjects of the high school curriculum (Korean, math and English), but are limited to essay writing, interview, oral test, practical test, aptitude and personality tests. In addition, applicants who are handicapped or who graduated from farming and fishing villages may request special screening.

HIGH SCHOOL RECORDS

Comprehensive high school records, also known as the high school activities records, provide detailed information on each student's academic performance and social behaviour. The record consists of the following 12 items:

1. personal information
2. educational background: student's schooling records (entrance, transfer and graduation) and special comments
3. school attendance
4. physical development
5. awards
6. certificates
7. career guidance: student's special talents and skills, interests, prospective occupation, parental expectations and special comments
8. academic achievement: grade and rank for each subject per semester and special talents and interests
9. extracurricular activities
10. volunteer work and special experiences
11. social and moral development: general comments per year
12. comprehensive comments: overall comments per year

COLLEGE SCHOLASTIC ABILITY TEST

The CSAT is a national exam announced in 1991 and implemented in 1994. The previous national admission exams had focused on academic achievement as demonstrated by the students' subject matter knowledge. In comparison, CSAT is not a purely subject-based test corresponding to the high school curriculum, but is designed to measure students' academic skills and general knowledge to better evaluate their readiness for higher education. Modeled after the SAT in the United States, it is also known as the "Korean SAT."

Early each year, institutions announce their student admission criteria and the relative weights assigned to the various elements such as CSAT score, comprehensive high school records, institution-administered examinations, interviews, essays and recommendation letters.

For example, in 1996 all 142 four-year colleges and universities used CSAT, with 115 of them admitting students based on the CSAT score and high school records without administering their own entrance exams.

CSAT has undergone several changes since 1994, with details of the test announced each year by the Korean Institute of Curriculum and Evaluation. Appendix A describes the details of that history.

Table 15 shows the CSAT subject areas and scores for the 2006 CSAT.

In 1998 the standard T-score scale with a mean of 50 and a standard deviation of 10 was adopted. The student report card of CSAT indicates raw scores for subject areas, standard T-scores, percentile ranks and the stanine. See Table 16 for a sample report.

TABLE 15. CSAT SUBJECT AREAS AND SCORES, 2006*

SUBJECT AREA		SUBJECT	SCORE
Korean Language			100
Mathematics (select one)	Math A	Math I Math II Select one out of three • Calculus • Probability and Statistics • Discrete Mathematics	100
	Math B	Math I	
Foreign Language (English)			100

TABLE 15. CSAT SUBJECT AREAS AND SCORES, 2006* (Continued)

SUBJECT AREA		SUBJECT	SCORE
Social Studies, Sciences, Vocational Education (select one)	Social Studies	Select up to four out of 11: • Ethics (Ethics and Thought plus Traditional Ethics) • Korean History • Korean Modern and Contemporary History • World History • Politics • Economics • Society and Culture • Law and Society • Korean Geography • Economic Geography • World Geography	50
	Sciences	Select up to four out of eight: • Physics I • Chemistry I • Biology I • Earth Science I • Physics II • Chemistry II • Biology II • Earth Science II	
	Vocational Education	Select one out of four computer-related subjects: • Agricultural Information Management • Basic Information Technology • General Computers • Fishery and Shipping Information Processing Select up to two out of 13: • Understanding of Agriculture • Techniques in Basic Agriculture • Introduction to Industry • Basic Drafting • Commercial Economy • Principles of Accounting • Introduction to Fisheries • General Marine Affairs • General Oceanography • Human Development • Food and Nutrition • General Design • Programming	
Foreign Languages or Chinese Characters and Classics		Select one from: • German I • French I • Spanish I • Chinese I • Japanese I • Russian I • Arabic I • Chinese Characters and Classics	50
Total			400

* Korean Institute of Curriculum & Evaluation (KICE). Retrieved Apr 21, 2006, from www.kice.re.kr/kice/eng/info/info_4.jsp

TABLE 16. CST SAMPLE REPORT, 2006*

REGISTRATION NUMBER	NAME	RESIDENT ID	HIGH SCHOOL (CLASS OR YEAR OF GRADUATION)
12345678	Hong, Gil-Dong	861234-1087654	Korean High School (2003)

Test	Korean Language	Math A	Foreign Language (English)	Social Studies				Foreign Languages or Chinese Characters and Classics
		Differentiation and Integration		Ethics	Korean History	Politics	World Geography	Japanese I
Standard Score	131	137	141	53	64	61	73	69
Percentile Rank	93	95	97	75	93	87	97	95
Stanine[1]	2	2	1	4	2	3	1	2

[1] Stanine, or standard nine score, represents one of nine intervals centred around the mean of normally distributed scores. Here, 1 means very superior; 5, average; and 9, very poor.

* Korean Institute of Curriculum & Evaluation (KICE). Retrieved Apr 21, 2006, from www.kice.re.kr/kice/eng/info/info_4.jsp

PROGRAMS AND CREDENTIALS

"CERTIFICATE OF GRADUATION" DIPLOMA/ASSOCIATE DEGREE PROGRAMS

Junior colleges offer short-term (mostly two-year) higher education programs that lead to a diploma. Students are trained to become mid-level technicians working in various vocational fields such as agriculture, fisheries, nursing, healthcare, home economics, social work, arts, athletics, technology and engineering. A few programs such as nursing, fisheries and navigation require three years or two and a half years of education; the rest require two years of education.

Admission into junior college is less competitive than into four-year colleges and universities, though requirements are the same:

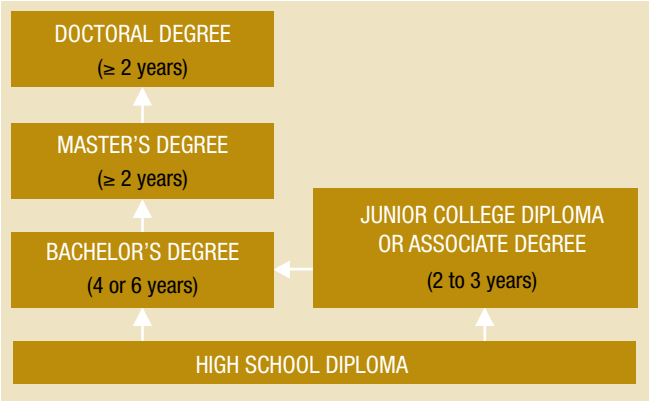
- completion of high school
- the College Scholastic Ability Test

Junior colleges reserve about 50 per cent of admission quotas for graduates of vocational high schools or people with national technical qualifications.

To achieve its educational goals, junior colleges adopt a practical curriculum and emphasize collaboration with industries. The curriculum consists of about 40 per cent general subjects and 60 per cent specialized subjects. Students must take 80 credit hours for a two-year course or 120 credit hours for a three-year course.

Upon successful completion of the program, students receive a Diploma (*Chonmun Taehak Chorupchang*, often translated as a Certificate of Graduation). Since 1997, colleges have been awarding associate degrees. Graduates may seek certification in the trade or profession they have studied or pursue further education by transferring to a four-year college or university.

TABLE 17. HIGHER EDUCATION CREDENTIALS



BACHELOR'S PROGRAMS

Bachelor's programs are offered at a variety of institutions, including four-year colleges and universities, industrial universities, national universities of education, the Korean National Open University, technical colleges and cyber universities.

These programs follow certain guidelines:

- Program length is generally four years; medical and dental courses take six years.
- A four-year bachelor's program generally requires a minimum of 130 to 140 credit hours for graduation. Four-year colleges and universities adopted the 140-credit hour system in 1981 (Weidman & Park, 2000,

p. 61). Many institutions, however, currently require 130 credits for graduation from their undergraduate programs. Certain fields of study such as law, pharmacy, veterinary medicine and teacher education may require more than 140 credits for graduation.

- A maximum of 24 credits can be earned each semester.
- The curriculum consists of general and specialized subjects, each divided into required and elective courses.
- General subjects should comprise 30 per cent of the total credit hours, to be selected among courses in humanities, social sciences, natural sciences and physical education. Because of the traditional emphasis on specialization, however, general education subjects may account for less than 30 per cent of total credit hours in some institutions.
- Students may major in one or two fields and take a minor according to the regulations of the institution.

General courses provide students with an all-round education and are divided into several study areas. Students must take courses from each area to ensure that they receive a balanced general education. Until 1989, institutions had to require national ethics, Korean history, and military training (for male students).

Students take general courses up to the third year of an undergraduate program although they may start taking specialized courses as early as the first year. Fourth year students may take some graduate courses and count them toward their undergraduate credit requirements.

Each department prescribes its required and elective major courses, as well as minor courses if minors are offered. See the end of the chapter for sample undergraduate curricula.

Professional programs such as engineering and law take four years. In order to practice law as a judge, attorney or public prosecutor, law school graduates must pass the National Bar Exam and complete a two-year training program at the Judicial Research and Training Institute affiliated with the Supreme Court. Programs in veterinary medicine take four years (traditional format) or six years (new format, introduced in the late 1990s).

Medical and dental programs (Western medicine, Oriental medicine and dentistry) take six years to complete. Western and Oriental medicine have the same legal status in South Korea, although Oriental medicine is only partially covered by the medical insurance system. Medical students complete two years of preparatory courses and four years of professional study. After graduation, they must pass a comprehensive exam and a national licensing exam before starting their one-year internship and three-year residency (Shim, Koh, & Ahn, 2004). The National Health Personnel Licensing Examination Board, a joint body of various health-related professional organizations such as the Korean Medical Association and the Korean Dental Association, administers the national licensing exams.

After completing all course requirements and a thesis, students receive a Bachelor's Degree *(Haksa)*, such as Bachelor of Arts, Bachelor of Science, Bachelor of Engineering, Bachelor of Law, Bachelor of Medicine, Bachelor of Oriental Medicine or Bachelor of Dentistry.

BACHELOR'S DEGREE FOR THE SELF-EDUCATED

Established in 1990, the bachelor's examination system allows one to earn a bachelor's degree without attending a regular college or university. To receive a bachelor's degree, an applicant has to pass four levels of examinations:

1. general courses—three compulsory and two optional subjects
2. basic major courses—three compulsory and three optional subjects
3. advanced major courses—three compulsory and three optional subjects
4. final comprehensive examination—four compulsory and two optional subjects

A bachelor's degree obtained through the examination system is equal to one obtained from a regular college or university and gives access to graduate study at the master's level.

By 2004, the examination system had awarded nearly 8,000 bachelor's degrees in 12 fields of study:

- Korean Language and Literature
- English Language and Literature
- Chinese Language and Literature
- Business Administration
- Law
- Mathematics
- Home Economics
- Public Administration
- Childhood Education
- Computer Science
- Agriculture
- Nursing

CREDIT BANK SYSTEM

As part of Korea's lifelong learning strategy, the CBS allows students to accumulate approved credits to obtain an associate or bachelor's degree. First proposed in 1995, CBS was implemented in 1998. The MOE & HRD conceives all policies related to the CBS through its Lifelong Learning Policy Division and delegates developmental and administrative work to the Korean Educational Development Institute.

Anyone with a high school diploma may apply for registration in the CBS. Students receive credits by:

- studying part-time at colleges and universities
- completing programs at CBS-accredited non-formal educational and training institutions
- acquiring national technical certificates, and
- passing bachelor's examinations for the self-educated

Correspondence or distance study is currently not accepted. KEDI evaluates and approves the accreditation of non-formal educational programs twice a year. It publishes and periodically updates the standardized curriculum and syllabus for each field of study. While CBS-accredited institutions must follow the standardized curricula and at least 70 per cent of the course content in the standardized syllabi, university extension classes and junior college special classes can adopt their own syllabi.

Each program includes courses in three categories:

- general subjects
- major subjects
- electives

Each type of program has to meet the minimum required credits in general and major subjects as well as the minimum total credits. There is also a limit on credits a student can receive each year (see Table 18).

One credit consists of 16 class hours (with one class hour equalling 50 minutes of a regular course or 100 minutes of a lab course) over a period of no less than two weeks.

The bachelor's examination can be considered part of the Credit Bank System—a student who has passed certain subjects without completing all levels of examinations can still obtain CBS-recognized academic credits for those subjects.

Student results at CBS-accredited programs are submitted to KEDI for credit registration. KEDI accepts the results of students with a score of at least 70 per cent and an attendance rate of at least 80 per cent. Credits from previous university education are accepted regardless of when they were awarded. National Technical Qualification certificates (explained more fully under Vocational and Technical Education) carry different credit values ranging from four to 45 based on the perceived difficulty in obtaining them. After completing the required credits, students may submit a degree application directly to KEDI or to the provincial office of education. They can choose to receive their bachelor's degree from the MOE & HRD or from a college or university.

SAMPLE UNDERGRADUATE CURRICULA

BACHELOR OF SCIENCE IN NURSING, KOREA UNIVERSITY

A minimum of 130 credits is required for the degree and eligibility to write the National Nursing Licensure Examination. These include:

- 51 credits of core nursing courses
- 37 credits of required basic courses
- 42 credits of electives

TABLE 18. CREDIT REQUIREMENTS OF THE CREDIT BANK SYSTEM

PROGRAM	GENERAL SUBJECTS	MAJOR SUBJECTS	TOTAL	PER YEAR
Bachelor's degree	≥ 30	≥ 60	≥ 140	≤ 36
Two-year associate degree	≥ 15	≥ 45	≥ 80	≤ 40
Three-year associate degree	≥ 15	≥ 54	≥ 120	≤ 40

TABLE 19. SAMPLE—BSc IN NURSING, KOREA UNIVERSITY*

YEAR	SEMESTER	COURSE TYPE	COURSE
1	1st	Required Basic	Korean Freshman English I Practical English for Freshmen I Logic (Select 1) General Physics and Laboratory General Chemistry and Laboratory General Biology and Laboratory (Select 1) Elementary Statistics Liberal Arts
		Elective	Education Course for Teacher's Certification Introduction to Education Educational Philosophy and History (Select 1)
	2nd	Required Basic	Introduction to Informatics Korean Composition Freshman English II Practical English for Freshmen II Elementary Statistics Workshop Cognitive Science Understanding Sociology
		Core	Introduction to Nursing
		Elective	Education Course for Teacher's Certification Sociology of Education

TABLE 19. SAMPLE—BSC IN NURSING, KOREA UNIVERSITY* (Continued)

YEAR	SEMESTER	COURSE TYPE	COURSE
2	1st	Required Basic	Introduction to Psychology
		Core	Fundamentals of Nursing I Fundamentals of Nursing Lab I
		Elective	Introduction to Communication Family and Nursing Human Anatomy Human Anatomy Lab Human Physiology Human Physiology Lab Biochemistry Education Course for Teacher's Certification Introduction to Education Educational Philosophy and History (Select 1) Educational Psychology
	2nd	Required Basic	Philosophical Understanding of Science
		Core	Fundamentals of Nursing II Fundamentals of Nursing Lab II
		Elective	Physical Examination Nutrition and Diet Pathology Pharmacology Microbiology Behavioural Psychology Education Course for Teacher's Certification Educational Curriculum and Evaluation Educational Methods and Technology Educational Administration

TABLE 19. SAMPLE—BSc IN NURSING, KOREA UNIVERSITY* (Continued)

YEAR	SEMESTER	COURSE TYPE	COURSE
3	1st	Core	Adult Nursing I Adult Nursing II Pediatric Nursing I Maternity Nursing I Nursing Ethics
		Elective	Adult Nursing III Introduction to Nursing Research Gerontological Nursing Education Course for Teacher's Certification Fundamentals of Military Science Strategies for Health Education
	2nd	Core	Psychiatric-Mental Health Nursing I Community Health Nursing I Adult Nursing Practice I
		Elective	Adult Nursing IV Pediatric Nursing II Maternity Nursing II Integrated Nursing Practice I Introduction to Clinical Nursing Introduction to Clinical Nursing Practicum Education Course for Teacher's Certification Development of Teaching Materials for Nursing
4	1st	Core	Nursing Management Adult Nursing Practice II Pediatric Nursing Practice Maternity Nursing Practice Health Care Law
		Elective	Psychiatric–Mental Health Nursing II Community Health Nursing II Professionalism in Nursing Education Course for Teacher's Certification School Health Practicum
	2nd	Core	Psychiatric–Mental Health Nursing Practice Community Health Nursing Practice Nursing Management Practice
		Elective	Integrated Nursing Practice II

*Korea University. Retrieved Apr 21, 2006, from http://nursing.korea.ac.kr/eng/programs/programs3.htm

BACHELOR OF SCIENCE, DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING, KAIST

A minimum of 130 credits is required for graduation. These include:

- 28 credits of general courses
- 32 credits of basic courses
- 45 credits of major courses
- 22 credits of elective courses
- three credits of research

Lecture courses are usually three credits and lab courses one credit. Students must also complete eight activity units (AU), which are not counted towards GPA, and meet one of the following English language requirements:

- PBT TOEFL: 560
- CBT TOEFL: 220
- TOEIC (Test of English for International Communication): 760
- TEPS (Test of English Proficiency, Seoul National University): 670

TABLE 20. SAMPLE—BSc IN ENGINEERING, KAIST*

COURSE GROUP	COURSE TYPE	CREDITS	COURSE
General Courses	Mandatory	7	English I
			English II
			Writing
		8 (AU)	Physical Education
			Community Service
	Elective	21	one course from Science and Technology division
			one course from Literature and Art division
			one course from History and Philosophy division
			one course from Social Science division
			one course from Foreign Language and Linguistics division
			two more courses
Basic Courses	Mandatory	23	Fundamental Physics I (3), General Physics I (3) or Advanced Physics I (3)
			Fundamental Physics II (3), General Physics II (3) or Advanced Physics II (3)
			General Physics Lab I (1)
			Basic Biology (3) or General Biology (3)
			Differentials and Integrals I (3) or Advanced Differentials and Integrals I (3)
			Differentials and Integrals II (3) or Advanced Differentials and Integrals II (3)
			Basic Chemistry (3), General Chemistry I (3) or Advanced Chemistry (3)
			General Chemistry Lab (1) or Advanced Chemistry Lab (1)
			Basic Programming (3) or Advanced Programming (3)
	Elective	9	
Major Courses	Mandatory	12	Mechanics of Materials (3)
			Structural Mechanics I (3)
			Fluid Mechanics (3)
			Vibrations Engineering (3)
	Elective	33	to be chosen from about 40 courses
Elective Courses		22	
Research Courses		3	BSc Thesis Research (3)

*Based on KAIST's *General Catalogue, 2005–2006.*

MASTER'S PROGRAMS

First introduced in 1949, master's programs are offered by graduate schools, which operate independently or within four-year colleges and universities. To be admitted, applicants must have a bachelor's degree or equivalent from a recognized institution.

With the application form, they must submit two recommendation letters and an undergraduate GPA report. They may also be required to take qualifying examinations in the proposed field of study and in English and attend an interview.

A master's program usually consists of 24 credit hours of coursework plus a thesis completed in four semesters or two years. Students enrolled in part-time (evening) study may take five semesters or longer. Professional master's programs may require 30 or more credits. The maximum number of credits that can be earned per semester is 12 for full-time students and six for evening students. The passing grade is 2.0 (C).

Students must:

- achieve an overall GPA of 3.0 (B) or better
- pass both a comprehensive examination and a foreign language examination
- complete and defend a thesis

Upon successful completion of the program, students receive a Master's Degree *(Suksa)*.

DOCTORAL PROGRAMS

To be admitted, applicants must have a master's degree or equivalent, research background in the field of study, and recommendations from established scholars.

Doctoral programs may be administered separately or integrated with master's programs. Students must complete 36 credit hours of coursework or 60 credit hours in combination with the master's degree, with an average of 3.0 (B) or better. Some programs may prescribe fewer coursework credits and substantial research credits (including seminar and dissertation research). It takes at least two years to complete the coursework and a total of three or more years to complete the entire doctoral program.

Students must:

- pass a comprehensive examination
- pass examinations in two foreign languages
- complete and defend a dissertation

Upon successful completion of the program, students receive a Doctor's Degree *(Paksa)*.

Teacher Education

KINDERGARTEN TEACHERS
(TWO-YEAR DIPLOMAS)

Many kindergarten teachers are trained in two-year diploma or associate degree programs at junior colleges. They may also take four-year bachelor's degree programs at colleges and universities, including colleges of education within national and private universities and the Korean National Open University.

ELEMENTARY SCHOOL TEACHERS
(BACHELOR'S DEGREE)

Eleven universities of education are specifically designed to train elementary schoolteachers. These used to be two-year teachers' colleges, but were upgraded to four-year institutions between 1981 and 1984.

Only a small number of elementary schoolteachers are trained outside of the universities of education. The alternatives include the departments of elementary education at colleges of education within universities such as Ewha Women's University, and elementary education courses at graduate schools of education.

Since 1945, elementary teacher education has gone through three stages:

- "normal schools" (1945–1961)
- two-year colleges (1962–1980)
- four-year colleges or universities (since 1981)

After 1945, the repatriation of Japanese teachers and the expansion of the education system resulted in a critical shortage of elementary teachers. The US military government established a number of secondary-level teacher training schools called "normal schools," and various teacher-training centres. Teacher certificates were granted to graduates of normal schools and high school graduates who completed 18 weeks of study at the training centres. In 1961, the government had all normal schools upgraded to two-year teachers' colleges.

TABLE 21. CURRICULUM FOR ELEMENTARY TEACHER EDUCATION

CATEGORY	COURSES	
General Courses (30%)	Required (65%)	Humanities
		Social Sciences
		Natural Sciences
		Physical Education
	Elective (35%)	Humanities
		Language and Literature
		Social Sciences
		Natural Sciences
		Arts
Major Courses (70%)	General Pedagogy (22 credits)	
	Subject-Specific Pedagogy	
	Training Courses for Arts and Physical Education	
	Advanced Courses	
	Practice Teaching	

The curriculum at the universities of education is fairly standardized, consisting of 30 per cent general courses and 70 per cent major courses (see Table 21). One hundred and fifty credits are required for graduation.

General pedagogy

- includes 11 subjects, such as educational psychology, educational sociology, educational philosophy, school and classroom management.

Subject-specific pedagogy

- covers the 11 subjects taught in elementary schools.

Training courses for arts and physical education

- teach practical skills in these two areas.

Advanced courses

- aim to improve students' ability to teach one of the 11 elementary subjects, and also include the graduation thesis.

Practice teaching

- lasts for nine weeks and includes the four courses of observation practice, participation practice, teaching practice and administrative work practice.

SECONDARY SCHOOL TEACHERS
(BACHELOR'S DEGREE)

While elementary school teachers are trained almost exclusively at universities of education, education of middle and high school teachers takes place in both special purpose and open programs. Students interested in becoming secondary school teachers may enrol in colleges of education within universities, departments of education in general colleges, teaching certificate programs in general colleges and graduate schools of education.

The curriculum adopted at the colleges of education within universities comprises general courses, major courses and teacher training courses (see Table 22). Students may choose a major, a major and a minor, or two majors. They must take at least 42 course credits in each major and at least 21 course credits in each minor. A graduation thesis is required. A minimum of 140 credits, or 150 at some national universities, is required for graduation.

TABLE 22. CURRICULUM FOR SECONDARY TEACHER EDUCATION

CATEGORY	COURSES
General Courses (30%)	Humanities Social Sciences Natural Sciences Arts Physical Education
Major Courses (≥ 30%)	Theoretical knowledge of secondary school subjects
Teacher Training (≥ 20 credits)	General Pedagogy Subject-Specific Pedagogy Practice Teaching

Students enrolled in general colleges can also become certified secondary school teachers by completing at least 20 credits in a teaching certificate program while fulfilling the requirements of their own majors.

CLASSIFICATION OF TEACHERS

The classification and qualification of teachers in South Korea are specified in the Elementary and Secondary School Education Act. There are six general categories of teachers (see Table 23):

- teachers
- assistant teachers
- counsellors
- librarians
- practical skills teachers
- nursing teachers

They must meet the required qualifications for each category and be licensed by the MOE & HRD.

School teachers are classified into first level and second level teachers. Graduates of pre-service teacher education programs may obtain second level teacher certificates from the institutions. They usually receive the certificates after undergoing an approval process, without having to take any test.

To obtain the first level teacher certificate, one must hold the second level teacher certificate, have taught for at least three years and completed a certificate training program of no less than 180 hours, or have taught for at least one year and completed a master's degree at a graduate school of education.

TABLE 23. TEACHER CLASSIFICATION*

CLASSIFICATION		QUALIFICATIONS
Teachers	1st Level Teachers	2nd level teacher's certificate, teaching experience and in-service education
	2nd Level Teachers	Teacher education programs in pre-service teacher education institutions
Assistant Teachers		Approval test passed for assistant teachers
Counsellors		Training courses for professional counsellors
Librarians		Training courses for school librarians
Practical Skills Teachers		Approval test passed for practical skills training teachers
Nursing Teachers		Required credits of teacher education courses as a graduate of nursing science

*Adapted from Jin, 2006.

Technical and Vocational Education

EDUCATIONAL PROGRAMS

Vocational and technical education has played an important role in the industrialization and rapid economic growth of South Korea since the 1960s. The MOE & HRD—working through its Human Resources Development Bureau and Lifelong and Vocational Education Bureau—assumes overall responsibility for vocational education in the country.

In the formal education system, vocational and technical education is provided at the secondary level by vocational high schools and at the post-secondary level mainly by junior colleges. Vocational high schools, which train craftsmen and skilled workers, provide three-year programs following six years of primary education and three years of junior secondary education. Junior colleges, which train mid-level technicians, provide mostly two-year programs that lead to a diploma or associate degree (since 1997). In addition, non-formal vocational education programs—ranging from a few hours to two years—are available from both public and private institutions.

To provide more opportunities for continuing vocational and technical education, industrial universities—also called polytechnics or universities of technology—were established in the 1980s. As there is no entrance examination, industrial universities are also known as open universities. They offer both diploma or associate degree and four-year bachelor's degree programs. Applicants must have a high school diploma and at least one year's work experience.

The Credit Bank System is also part of the country's lifelong vocational education strategy, allowing flexible, part-time university study for people already in the workforce.

VOCATIONAL AND TECHNICAL QUALIFICATION SYSTEM

In South Korea—as in Canada—vocational and technical qualifications are separate from academic credentials. Holders of academic degrees or diplomas must pass a separate qualifying exam in order to obtain qualification in a specific vocational or technical area. The government manages national qualifications; private associations and businesses manage private qualifications.

The National Technical Qualification system, introduced in 1973 and managed by the Ministry of Labour, is the most important qualification system in the country. It falls into two main groups: the technical–skill group and business–service group, with over 600 items of qualification under 26 occupational categories.

For example, the occupational category "business management" in the business–service group includes five related skills (word processing, Korean shorthand, English shorthand, secretarial work, and computer application), each divided into three levels, adding up to a total of 15 qualification items.

KOREA RESEARCH INSTITUTE OF VOCATIONAL EDUCATION AND TRAINING

The Vocational Education and Training Promotion Act (1997) stipulates the establishment of KRIVET (www.krivet.re.kr). Working closely with the MOE & HRD and the Ministry of Labour, KRIVET advises the two ministries on vocational education and human resources development policies and supports their implementation.

Its main responsibilities include:

- research and development of policies related to vocational education and training (VET)
- collection of information and data on VET
- development and dissemination of VET programs
- research and development of policies on technical qualifications systems
- review, survey and research for national accreditation of private qualifications
- evaluation and recognition of VET institutions and their programs

VOCATIONAL HIGH SCHOOLS

As of 2004, there were 729 vocational high schools with an enrolment of over half a million, or slightly less than one third of the total high school enrolment. Middle school graduates, after passing the national high school qualifying examination, may apply to the vocational high school of their choice. They are admitted on the basis of middle school records, the results of the school-administered entrance examination, or a combination of both. Some vocational high schools, designated as special status schools, receive special funding that enables them to provide students with subsidies toward tuition and accommodation.

CURRICULUM

From 40 to 60 per cent of the curriculum at vocational high schools consists of general courses and the remainder vocational courses. As in general academic high schools, students have to complete a minimum of 216 units over three years in order to graduate. These must include at least 82 units of general courses, of which 56 must be from the national basic common subjects. For more on the national high school curriculum, refer to the chapter on School Education. The national curriculum also lists courses for different areas of specialization such as agriculture, technology–industry, commerce, and fishery and marine transportation. These courses are listed at the website of the Korea Institute of Curriculum and Evaluation www.kice.re.kr/kice/eng/index.jsp.

Vocational high school education emphasizes practical experience and school–industry cooperation. Grade 12 students take field study courses for six to 12 months, an extension from the three- to six-month period before 1994. Schools that offer field study courses for one year (known as the 2+1 system) may adjust the total number of units in general and specialized subjects with the approval of metropolitan or provincial authorities.

SCHOOL CATEGORIES

Vocational high schools fall into these main categories:

- agriculture
- technology–industry
- commerce
- fishery and marine transportation
- comprehensive vocational

Agricultural high schools focus on farm management, mechanization and research. The national curriculum lists about 40 specialized courses in agriculture, three of which are compulsory for students on the agriculture track:

- Understanding of Agriculture
- Techniques in Basic Agriculture
- Agricultural Information Management

Technological or industrial high schools prepare students for rapid changes in technology and development and aim to produce technicians who can cover a wide range of technical areas. Since 1994, most schools have adopted the 2+1 system, providing two years of school education followed by one year of field training. The national curriculum lists over 100 specialized courses in technology, three of which are compulsory for students on the technology track:

- Introduction to Industry
- Basic Drafting
- Basic Information Technology

Commercial high schools cover a wide range of subjects such as information processing, management, foreign language, office automation, and graphic design. The national curriculum lists over 30 specialized courses in commerce, three of which are compulsory for students on the commerce track:

- Commercial Economy
- Principles of Accounting
- Introduction to Computers

Located in harbour cities, fishery and marine transportation schools train students in the use of maritime resources and navigation technology. Practical experience at sea, with six months' on-the-job training, is required for graduation. The national curriculum lists over 30 specialized courses in fishery and marine transportation, three of which are compulsory for students on the fishery and marine transportation track:

- General Oceanography
- Fishery and Shipping Information Processing
- General Fisheries (fishery track) or General Marine Affairs (marine transportation track)

Other vocational tracks include home economics and vocational education, foreign language and international affairs. The national curriculum also lists specialized courses in the areas of science, physical education and the arts.

Comprehensive vocational schools offer a combination of academic and vocational programs. They are usually located in rural areas or small and medium-sized cities to provide people there with equal education opportunities.

VOCATIONAL HIGH SCHOOL DIPLOMA

Upon graduation from vocational high schools, students receive the Vocational High School Diploma *(Silopgye Kodung Hakkyo Choeupchang)*, often translated as a Certificate of Graduation. They may go to college or join the workforce or the military (see Table 24).

TABLE 24. VOCATIONAL HIGH SCHOOL GRADUATES' RATE OF ADVANCEMENT TO HIGHER EDUCATION, EMPLOYMENT OR THE MILITARY*

YEAR	GRADUATES	ADVANCEMENT	EMPLOYMENT	ENLISTED	RATE OF ADVANCEMENT (%)	RATE OF EMPLOYMENT (%)
1965	47,289	7,919	6,674	945	16.7	43.4
1975	126,141	11,048	63,437	2,060	8.8	56.1
1985	276,535	36,910	143,214	2,528	13.3	60.4
1990	274,150	22,710	210,113	1,402	8.3	84.0
1995	259,133	49,699	190,148	333	19.2	90.9
1996	274,696	60,373	196,403	313	22.0	91.8
1997	273,912	79,961	177,532	375	29.2	91.7
1998	302,416	107,824	164,075	847	35.7	84.7
1999	290,892	112,130	148,478	797	38.5	83.4
2000	291,047	122,170	149,543	523	42.0	88.8
2001	270,393	121,411	130,968	481	44.9	88.2
2002	231,127	115,103	104,138	347	49.8	90.0
2003	189,510	109,234	72,212	251	57.6	90.2
2004	182,835	113,944	60,062	354	62.3	87.6

*MOE & HRD, 2004.

JUNIOR COLLEGES

The current structure of two-year junior colleges was established in 1979, when the five-year vocational programs comprising three years of high school and two years of post-secondary vocational were phased out. Junior college education expanded dramatically in the 1980s and 1990s, with total enrolment increasing by almost 14 times between 1975 and 2000. Since 1976 junior college graduates have enjoyed higher employment rates than graduates of four-year colleges and universities. As of 2004 there were 158 junior colleges (14 national or public and 144 private) with about 900,000 students registered, or slightly less than one third of the total higher education enrolment.

KOREAN COUNCIL FOR COLLEGE EDUCATION

First established in 1979, the KCCE consists of the presidents of all colleges (national, public and private) in South Korea. It aims to enhance the autonomy and solidarity of colleges, promote their development and cooperation and make policy recommendations to the government. The 158 recognized colleges are listed on its website, www.kcce.or.kr.

ADMISSION

Admission into junior colleges has grown more competitive in recent years, though they remain a second choice to four-year universities. Entrance requirements include the completion of high school and the College Scholastic Ability Test. Junior colleges reserve about 50 per cent of admissions for graduates of vocational high schools, people with national technical qualifications, and employees meeting specific industrial requirements.

PROGRAMS

Junior colleges offer post-secondary programs that lead to a diploma or associate degree. Students are trained to become mid-level technicians with both theoretical knowledge and practical skills to work in vocational fields such as:

- agriculture
- fishery
- nursing
- healthcare
- home economics
- social work
- arts
- education

- athletics
- technology
- engineering

The majority of the 1,445 programs offered by junior colleges are two years in length. About 10 per cent of the programs require three years of education. These include specialties such as:

- nursing
- clinical pathology
- physical therapy
- occupational therapy
- dental laboratory technology
- dental hygiene
- radiography
- fishery
- engineering

To boost the status of junior colleges, they have been allowed to delete the word "junior" from their school names since 1995 and authorized to award associate degrees since 1997. Engineering is the most popular area of study (see Table 25).

Junior colleges adopt a practical curriculum and emphasize collaboration with industries. The curriculum consists of about 40 per cent general subjects and 60 per cent specialized subjects. Students must take 80 credit hours for a two-year program or 120 credit hours for a three-year program.

The majority of students attend full-time day programs, but there is a substantial minority of full-time evening students. Evening students are generally employed during the day and study for four hours per evening, four to five evenings a week, proceeding at the same pace as day students and completing programs within the same period.

As the Korean economy becomes increasingly technology-intensive, the focus of vocational education has shifted from vocational high schools to junior colleges. Several pilot programs link the curriculum of the second and third years of vocational high schools with that of vocational colleges, known as the 2+2 system. To strengthen school–industry cooperation, a customized training system with programs tailored to industrial needs has been introduced, in which members of the industrial sector participate in developing and teach junior college programs.

DIPLOMA OR ASSOCIATE DEGREE

Upon successful completion of a college program, students receive a Diploma *(Chonmun Taehak Chorupchang)*, often translated as a Certificate of Graduation. Junior colleges have been awarding associate degrees since 1997. Graduates may seek certification in the trade or profession they have studied, or pursue further education by transferring to a four-year college or university, industrial university, or air and correspondence university. In some fields of study, holders of diplomas or associate degrees may take a two-year bridging program to get a bachelor's degree.

TABLE 25. JUNIOR COLLEGE STUDENTS BY MAJOR AREAS OF STUDY, 2004*

SCHOOL TYPE	AREA OF STUDY						
	HUMANITIES	SOCIAL SCIENCES	EDUCATION	ENGINEERING	NATURAL SCIENCES	MEDICINE AND PHARMACY	ARTS AND PHYSICAL EDUCATION
Total	35,423	183,367	31,817	347,284	68,082	84,157	147,459
National	460	1,150	341	8,815	1,576	1,454	925
Public	866	3,662	293	12,477	2,336	295	4,097
Private	34,097	178,555	31,183	325,992	64,170	82,408	142,437

*Adapted from Jin, 2006.

TECHNICAL QUALIFICATION SYSTEM

The vocational and technical qualification system in South Korea consists of national and private qualifications (see Table 26). The government recognizes some private qualifications certified by private organizations and companies.

NATIONAL TECHNICAL QUALIFICATION

NTQ—introduced in 1973 and managed by the Ministry of Labour—is the central qualification system in the country. Over 10 million people hold NTQ certificates, accounting for more than 50 per cent of all certificate holders.

NTQ has two main groups (see Table 27):

- technical–skill group
- business–service group

The technical group has five levels:

- engineer
- industrial engineer
- professional engineer
- craftsman
- master craftsman

It includes 26 occupational categories such as:

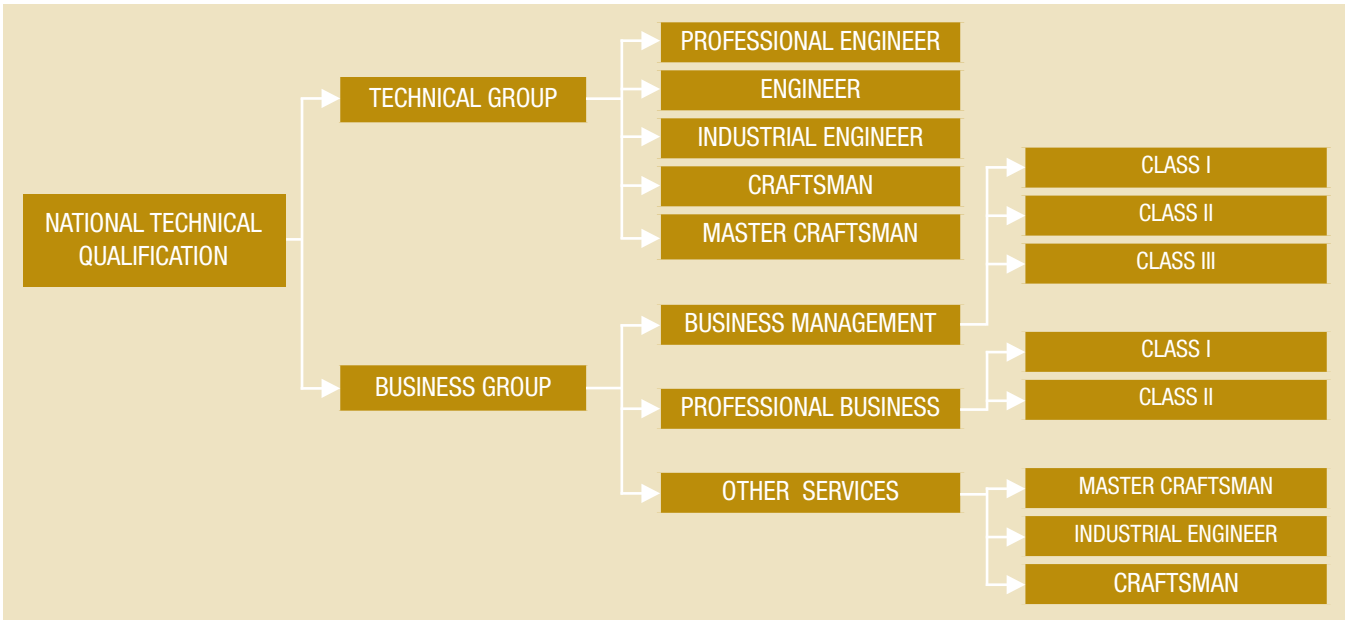
- machinery
- metal
- chemical engineering and ceramics
- electronics
- electricity
- communications
- shipbuilding

TABLE 26. STRUCTURE OF QUALIFICATION SYSTEM IN KOREA*

VOCATIONAL AND TECHNICAL QUALIFICATIONS IN KOREA			
NATIONAL QUALIFICATIONS		PRIVATE QUALIFICATIONS	
NATIONAL TECHNICAL QUALIFICATION	NATIONAL NON-TECHNICAL QUALIFICATIONS	AUTHORIZED PRIVATE QUALIFICATIONS	NON-AUTHORIZED PRIVATE QUALIFICATIONS
National Technical Qualification Act	Separate acts under 24 related ministries	Basic Act of Qualification and Employment Insurance Act	No legal basis
26 occupations	18 occupations (for example, lawyer, accountant, patent attorney)	Conferred by private organizations and companies	Names and numbers unclear
622 items	120 items	66 items	

*As of August 2002. Based on Kang, 2006.

TABLE 27. CLASSIFICATION OF NATIONAL TECHNICAL QUALIFICATIONS



- aeronautics
- civil engineering
- ocean and fisheries
- industrial design

The business group is subdivided into:

- business management (Class I, Class II and Class III)
- professional business (Class I and Class II)
- other services (master craftsman, industrial engineer, craftsman)

This group covers business and other skills such as word processing, job counselling, electronic commerce, cooking and beautician.

Significantly, NTQ recognizes both formal and non-formal prior learning. There is no requirement for applying to the level of craftsman. The levels of industrial engineer and above require formal education, work experience or a combination of both.

The criteria for granting various levels of certification and eligibility for application are as follows.

Professional Engineer

Criteria: The applicant has the ability to plan, research, design, analyze, test, operate, construct, evaluate or guide and supervise relevant activities with a high level of expert knowledge and field experience.

Eligibility: "Engineer" plus four years' experience; university graduate and seven years' experience; or 11 years' experience.

Master Craftsman

Criteria: The applicant has plenty of experience and skills in order to supervise and guide other workers, carry out on-site training, and act as a link between the management and production workers.

Eligibility: "Industrial engineer" plus six years' experience; "craftsman" plus eight years' experience; or 11 years' experience.

Engineer

Criteria: The applicant has the ability to carry out skilled tasks such as design, construction and analysis with engineering knowledge.

Eligibility: "Industrial engineer" plus one year's experience; university graduate; or four years' experience.

Industrial Engineer

Criteria: The applicant has the ability to carry out multi-skill tasks with basic technical knowledge or experience.

Eligibility: "Craftsman" plus one year's experience; junior college graduate; or two years' experience.

Craftsman

Criteria: The applicant has the ability to carry out task management duties such as production, manufacture, operation, repair and inspection.

Eligibility: Open.

The Korea Manpower Agency under the Ministry of Labour and the Korea Chamber of Commerce and Industry are commissioned to carry out the National Technical Qualification Testing. This includes a combination of written and practical exams. Those applying for the title of professional engineer must also undergo an interview. The testing is rigorous, with the average passing rate for all levels at about 20 per cent (see Table 28).

TABLE 28. NTQ CANDIDATES AND PASSING RATES, 1977–2002*

LEVEL OF QUALIFICATION	CANDIDATES	SUCCESSFUL CANDIDATES	PASSING RATE (%)
Professional engineer	231,011	24,803	10.7
Master craftsman	31,218	6,396	20.5
Engineer	4,178,274	672,612	16.1
Industrial engineer	5,763,007	833,402	14.5
Craftsman	22,780,722	5,322,865	23.4
Total	32,984,232	6,860,078	20.8

*Shin, KRIVET.

NATIONAL TECHNICAL QUALIFICATION AND THE CREDIT BANK SYSTEM

The Credit Bank System, which allows students to accumulate credits through part-time study to obtain an associate or bachelor's degree, recognizes NTQ by awarding credit values to different levels of certificates.

TITLE	CREDITS
Professional engineer	45
Master craftsman	39
Engineer	30
Industrial engineer	24
Level I word processing	12
Level II secretarial work	4

OTHER NATIONAL QUALIFICATIONS

National qualifications other than NTQ are operated under different legislation by 24 ministries of the central government such as:

- the Ministry of Health and Welfare
- the Ministry of Construction and Transportation
- the Ministry of Maritime Affairs and Fisheries
- the Ministry of Culture and Tourism
- the Ministry of Agriculture and Forestry
- the MOE & HRD

Compared with NTQ, the other national qualifications often have more specific requirements in formal education, such as university or graduate degrees in fields of study related to the qualification. The majority of these other national qualifications do not fall into different levels.

PRIVATE QUALIFICATIONS

Private associations, organizations and businesses manage private qualifications. Of the estimated 1,000 items of private qualifications, only a small number (66) meet the standards set by the Basic Act of Qualification and are authorized by the Ministry of Labour or other ministries of the central government. Authorized private qualifications have the same status as national qualifications.

Examples include:

- credit analyst (Ministry of Finance and Economy)
- Chinese character levels (MOE & HRD)
- industrial machinery repairman (Ministry of Commerce, Industry and Energy)
- information systems manager (Ministry of Information and Communication)
- hospital administrator (Ministry of Health and Welfare)

Grading Scale

SECONDARY EDUCATION

From grades 3 to 12, a five-level grading scale *(Su, Wu, Mi, Yang* and *Ga)* predominates. It corresponds to percentage scores as illustrated on Table 29. The passing percentage score is 60. Schools may adjust the grading scale in view of the level of difficulty of the examinations. Official transcripts usually include an explanation of the grading system.

Korean students in elementary and secondary schools are almost never failed; therefore students receiving *Ga* may still be allowed to continue their study.

HIGHER EDUCATION

Higher education institutions generally use the same five-level grading scale as elementary and secondary schools. Students may get a letter or numeric grade corresponding to ranges of percentage scores (see Table 30). The passing percentage score is 60.

Many institutions use a plus-and/or-minus (+/—) variant of the scale, with 4.3 or 4.5 as the highest possible grade point. The actual cut-off adopted by each institution varies. (See Tables 31 through 33.) Official transcripts usually include an explanation of the grading scale.

Graduate students must achieve an overall GPA of 3.0 (B) or better to be awarded master's or doctoral degrees. The graduate grading scale may be different from the undergraduate one, with 70 rather than 60 as the passing percentage grade (see Table 33).

TABLE 29. FIVE-LEVEL GRADING SCALE, SECONDARY EDUCATION

KOREAN GRADE	KOREAN ROMANIZATION	DESCRIPTOR	PERCENTAGE SCORE (%)	CANADIAN LETTER GRADE	IQAS* (%)
수	*Su*	Outstanding	Above 90	A	88
우	*Wu*	Excellent	80–90	B	74
미	*Mi*	Average	70–80	C	62
양	*Yang*	Below average	60–70	D	52
가	*Ga*	Poor	Below 60	F	F

*IQAS-recommended grade conversion

TABLE 30. FIVE-LEVEL GRADING SCALE, HIGHER EDUCATION

KOREAN LETTER GRADE	GRADE POINT	PERCENTAGE SCORE (%)	IQAS (%)
A	4	Above 90	88
B	3	80–90	74
C	2	70–80	62
D	1	60–70	52
F	0	Below 60	F

TABLE 31. GRADING SCALE, SEOUL NATIONAL UNIVERSITY*

LETTER GRADE	GRADE POINT	PERCENTAGE SCORE (%)	IQAS (%)
A+	4.3	100	96
A	4.0	96	88
A-	3.7	93	82
B+	3.3	89	77
B	3.0	86	74
B-	2.7	83	70
C+	2.3	79	66
C	2.0	76	62
C-	1.7	73	58
D+	1.3	69	55
D	1.0	66	52
D-	0.7	63	50

*Seoul National University. Retrieved Mar 28, 2006, from www.useoul.edu/se_stu/se_stu_gr/se_stu_gr.jsp

TABLE 32. GRADING SCALE, DONG-A UNIVERSITY*

LETTER GRADE	GRADE POINT	PERCENTAGE SCORE (%)	IQAS (%)
A+	4.5	95–100	96
A	4.0	90–94	88
B+	3.5	85–89	80
B	3.0	80–84	74
C+	2.5	75–79	68
C	2.0	70–74	62
D+	1.5	65–69	57
D	1.0	60–64	52
F	0.0	0–59	F

*Dong-A University. Retrieved July 19, 2006, from http://english.donga.ac.kr/campus/ecampus_sub_102.asp?pagecode=102

TABLE 33. GRADUATE GRADING SCALE, DONG-A UNIVERSITY*

LETTER GRADE	GRADE POINT	PERCENTAGE SCORE (%)	IQAS (%)
A+	4.5	95–100	96
A	4.0	90–94	88
B+	3.5	85–89	80
B	3.0	80–84	74
C+	2.5	75–79	68
C	2.0	70–74	62
F	0.0	0–69	F

*Dong-A University. Retrieved July 27, 2006, from http://english.donga.ac.kr/academics/eacademic_sub_48.asp?pagecode=48

Documentation

Major Educational Credentials

Educational credentials in South Korea are issued directly by institutions. The language of instruction is Korean and documents may be issued in either Korean or English. Table 34 lists the major types of Korean educational credentials.

Secondary School Documents

Secondary school credentials from South Korea must be certified by the issuing school with an official seal and the signature of a school official, such as the principal. The most common documents are general and vocational high school diplomas, often translated as "certificate of graduation" or "graduation certificate," and transcripts, often translated as "scholastic records." Transcripts usually include an explanation of the grading system.

Documents may be issued in both Korean and English, and are sometimes accompanied by a certificate of notarization attesting to the accuracy of the English translation. Commonly, Korean applicants submit only the English version of their secondary school documents. When evaluating secondary documents, Korean originals should be requested whenever possible, as the English version may not be an accurate translation in terms of the grades and does not always indicate units completed for each course.

Higher Education Documents

Higher education institutions in South Korea issue certified copies of credentials in English and can send them directly to a Canadian institution or assessment service. Official credentials, including diplomas, degrees and transcripts, carry the seal of the institution and the signature of an official such as the Dean.

TABLE 34. MAJOR EDUCATIONAL CREDENTIALS

CREDENTIAL	PROGRAM LENGTH (YEARS)	ENTRANCE REQUIREMENTS	GIVING ACCESS IN HOME COUNTRY	IQAS GENERAL COMPARISON
General High School Certificate of Graduation	3	Middle school diploma	College or university	Grade 12
Vocational High School Certificate of Graduation	3	Middle school diploma	College or university	Grade 12
Diploma or Associate Degree	2–3	General or vocational high school diploma and CSAT	University	Post-secondary diploma
Any Bachelor's degree	4	General or vocational high school diploma and CSAT	Master's programs	Bachelor's degree
Bachelor of Medicine, Veterinary Medicine, Oriental Medicine, or Dentistry	6 (2+4)	General or vocational high school diploma and CSAT	Professional practice; 1-year internship and 3-year residency required for medical practice	First professional degree
Any Master's degree	≥ 2	Bachelor's degree and entrance exam	Doctoral programs	Master's degree
Any Doctoral degree	≥ 3	Master's degree		PhD

DEGREE NAMES

Academic degrees are named after major areas of study. Following is a list of common bachelor's degrees:

- Bachelor of Agriculture
- Bachelor of Arts
- Bachelor of Business Administration
- Bachelor of Dentistry
- Bachelor of Economics
- Bachelor of Engineering
- Bachelor of Fine Arts
- Bachelor of Law (LLB)
- Bachelor of Medicine
- Bachelor of Music
- Bachelor of Nursing
- Bachelor of Physical Education
- Bachelor of Political Science
- Bachelor of Public Administration
- Bachelor of Science
- Bachelor of Science in Veterinary Medicine

All bachelor's degrees are four years with the exception of medical and dental programs (medicine, Oriental medicine, dentistry and recent veterinary medicine programs), which are six years.

Law programs are four years, but in order to practice law as a judge, attorney or public prosecutor, law school graduates must pass the National Bar Exam and complete a two-year training program at the Judicial Research and Training Institute affiliated with the Supreme Court.

Institutions may categorize their degrees differently. For example, a four-year undergraduate course in nursing may lead to a Bachelor of Nursing or a Bachelor of Science in Nursing. The first professional degrees are usually called bachelor's degrees, such as Bachelor of Medicine, Bachelor of Dentistry, and Bachelor of Science in Veterinary Medicine. A few are called doctor's degrees. For example, the College of Veterinary Medicine at Seoul National University offers a Doctor of Veterinary Medicine (DVM) program, which is the first professional degree in veterinary medicine comprising a two-year pre-veterinary course and a four-year veterinary course.

RECOGNIZED INSTITUTIONS

The MOE & HRD supervises the majority of national, public and private higher education institutions. In addition to international publications such as the *International Handbook of Universities and World of Learning*, one can also determine the recognition status of an institution by consulting updated lists on official Korean websites:

- 201 universities—Korean Council for University Education (www.kcue.or.kr/english/)
- 158 colleges—Korean Council for College Education (www.kcce.or.kr/)

Neither of these lists includes institutions not under the jurisdiction of the MOE & HRD, such as military academies. In addition, the Ministry of Labour supervises 23 polytechnic colleges through the Korea Foundation of Polytechnic Colleges (www.kopo.or.kr/english/index.asp). The polytechnic colleges have the same status as junior colleges and offer two- or three-year programs leading to industrial associate degrees.

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WEBSITES

KOREAN WEBSITES

Korea Chamber of Commerce & Industry (http://english.korcham.net/)

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Korea Institute of Curriculum & Evaluation (www.kice.re.kr/kice/eng/index.jsp)

Korea Research Institute for Vocational Education & Training (www.krivet.re.kr/)

Korean Council for College Education (www.kcce.or.kr/)

Korean Council for University Education (www.kcue.or.kr/english/)

Korean Educational Development Institute (http://eng.kedi.re.kr/)

Korean Overseas Information Service (www.korea.net/)

Ministry of Education & Human Resources Development (MOE & HRD) (http://english.moe.go.kr/)

Office of the Prime Minister (www.opm.go.kr/warp/webapp/home/en_home)

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Appendix A— The History of the College Scholastic Ability Test (CSAT)

When first introduced, the CSAT had four sections consisting entirely of multiple choice questions (one out of five) with a maximum of 200 points (see Table 35). Some institutions imposed extra weight on a specific testing section to reflect the academic requirements of certain fields of study. For example, in the 1996 school year, Seoul National University (SNU) imposed 100 extra points on the inquiry section, so that the maximum score for all SNU applicants was 300 rather than 200 points.

As recommended by the revised Education Act of 1995, a new CSAT format was adopted for the 1997 school year (see Table 36). Total points increased from 200 to 400, subjective questions requiring short answers now comprised 20 per cent of Math I and the weight of listening comprehension items increased in the foreign language (English) section.

A second foreign language, Chinese Characters and Classics, was introduced as an optional subject area in 2000.

TABLE 35. CSAT SUBJECT AREAS AND SCORES, 1996*

SUBJECT AREA		SCORE
Korean Language (Verbal)		60
Math Inquiry	Math	40
	Inquiry	60
Foreign Language (English)		40
Total		200

TABLE 36. CSAT SUBJECT AREAS AND SCORES, 1997*

SUBJECT AREA					SCORE
Korean Language					120
Math Inquiry	Math Inquiry I: Math		Humanities Track	General Math Math I	80
			Science Track	General Math Math I Math II	
	Math Inquiry II: Inquiry	Natural Science Inquiry	Humanities Track	Natural Science I	120
			Science Track	Natural Science I Natural Science II Physics & Chemistry	
		Social Studies Inquiry	Humanities Track	Korean History National Ethics Politics & Economics Korean Geography World History Society and Culture World Geography	
			Science Track	Korean History National Ethics Politics & Economics Korean Geography World History	
Foreign Language (English)					80
Total					400

* Tables 35 & 36 are based on Pak (1997, p. 256).

Appendix B—Placement Recommendations

The placement recommendations are guidelines for international educational credentials and how they compare to Canadian educational standards. They represent benchmark credentials and do not cover all credentials. The fact that a credential is not mentioned in the placement recommendations does not mean it cannot be assessed by IQAS. International credentials that are not covered by the placement recommendations should therefore be referred to IQAS for individual evaluation.

The placement recommendations are advisory in nature, and indicate the general level of a credential in Canadian terms.

Given the different educational philosophies, objectives and program structures in the educational systems of the world, evaluation in terms of direct equivalence to specific Canadian credentials is not possible. It is for this reason that IQAS' placement recommendations are made in terms of 'generally compares' and not 'equivalent'.

When evaluating international credentials IQAS considers the following; the education system of the country concerned, the recognition of the awarding institution, and the level, length and structure of the program.

When appropriate, IQAS may consider that comparison to a different level of education may more accurately reflect the level of the international credential in Canadian terms. IQAS may also combine two or more credentials if it is considered appropriate.

CREDENTIAL NAME	ENTRANCE REQUIREMENTS	LENGTH OF STUDY	COMPARISON TO EDUCATIONAL STANDARDS IN ALBERTA AND CANADA
General High School Certificate of Graduation	Completion of Middle School (9 years)	3 years	Generally compares to the completion of Grade 12.
Vocational High School Certificate of Graduation	Completion of Middle School (9 years)	3 years	Generally compares to the completion of Grade 12, including vocational study.
Diploma/Associate Certificate of Graduation/Junior College Diploma	Completion of General/Vocational High School Certificate of Graduation (12 years)	2 – 3 years	Generally compares to the completion of a two-year (or three-year) postsecondary Diploma.
Bachelor's degree	Completion of General/Vocational High School Certificate of Graduation (12 years)	4 years	Generally compares to the completion of a four-year Bachelor's degree.
Bachelor of Medicine/Dentistry	Completion of General/Vocational High School Certificate of Graduation (12 years)	6 years	Generally compares to the completion of a first professional university degree in medicine/dentistry.
Bachelor of Oriental Medicine	Completion of General/Vocational High School Certificate of Graduation (12 years)	6 years	Generally compares to the completion of a first professional university degree with a focus in oriental medicine.
Bachelor of Veterinary Medicine	Completion of General/Vocational High School Certificate of Graduation (12 years)	4 years	Generally compares to the completion of a first professional university degree in veterinary medicine
Master's degree	Completion of Bachelor's degree	2 years	Generally compares to the completion of a two-year Master's degree.
Master of Business Administration (MBA)	Completion of Bachelor's degree	2 years (minimum)	Generally compares to the completion of a Master of Business Administration degree.
Doctoral degree (PhD)	Completion of Master's degree	3 years (minimum)	Generally compares to the completion of a Doctor of Philosophy (PhD) degree.

Appendix C—Sample Documents

General High School Certificate of Graduation (page 1)

No. 73

PENIEL HIGH SCHOOL

Address: 57-1 San, Guseo-Dong, Kumjung-Ku, Pusan,Korea
Phone : (051) 582-6611 Fax : (051) 582-6615

CERTIFICATE OF GRADUATION

Name : [redacted]
Birth Date : February 26, 1974
Sex : Female
Entrance date : March 3, 1989
Graduation Date : February 13, 1992
Issue date : July 4, 2005

This is to certify that the above-mentioned person completed all required courses at PENIEL HIGH SCHOOL and graduated on February 13, 1992.

Jun-Yang Lee
Principal of **PENIEL HIGH SCHOOL**

GENERAL HIGH SCHOOL CERTIFICATE OF GRADUATION (PAGE 2)

PENIEL HIGH SCHOOL

57-1 San, Guseo-Dong, Kumjung-Gu,
Pusan, South Korea (609-310)

Issue No : 93
Date Issued : July 4, 2005

TRANSCRIFT OF SCHOOL RECORDS

NAME : [redacted]	Date of Birth :February 26, 1974
Entered on(입학) :89.3.4	Graduated / Left on(졸업/퇴학) :92.2.13

Subject		10th Grade (1989~1990)				11th Grade (1990~1991)				12th Grade (1991~1992)			
		1st term		2nd term		1st term		2nd term		1st term		2nd term	
		Grade	Crdts	Grade	Crdts	Grade	Crdts	Grade	Crdts	Grade	Crdts	Grade	Crdts
윤리	Ethics	B	1	B	1	C	1	A	1	B	2	C	2
국어	Korean Language1	C	3	A	3	B	2	B	2	A	3	C	3
국어	Korean Language2					B	3	B	3	B	4	B	4
작문	Korean Composition												
한문	Chinese Classics 1	A	1	B	1	B	1	C	1				
한문	Chinese Classics 2	A	1	B	1	B	1	C	1				
공통 수학	General Mathematics												
수학I	Mathematics 1	B	4	B	4	A	3	A	3				
수학II	Mathematics 2									B	5	B	5
공통사회	Social Studies	B	1	C	1	B	1	A	1	B	2	A	2
국사	Korean History	B	2	B	2					B	2	C	2
정치	Political Science												
경제	Economy												
사회 문화	Society & Culture												
세계사	World History					B	1	A	1	B	1	B	1
한국지리1	Korean Geography1	C	1	C	1					B	2	B	2
한국지리2	Korean Geography2					B	1	B	1	B	1	B	1
물리1,2	Physics 1,2	C	1	C	1					B	1	A	1
화학1,2	Chemistry 1,2	C	1	C	1	C	1	B	1				
지구과학I	Earth Science 1												
지구과학II	Earth Science 2												
생물I	Biology 1	C	1	B	1	C	1	B	1	B	1	A	1
생물II	Biology 2												
상업	Commerce												
체육I	Physical education 1	B	3	C	3	B	2	B	2	A	2	A	2
체육II	Physical education 2												
교련	Military Drill	B	2	C	2	B	2	B	2	A	2	A	2
음악	Music	B	1	A	1	C	1	B	1				
가정	Home Economics	A	2	A	2	C	2	A	2	B	1	B	1
미술	Fine Arts	B	1	A	1	A	1	A	1				
기술	Industrial Arts	A	1	A	1	C	1	A	1	B	2	B	2
일어	Japanese	B	2	B	2	A	3	A	3				
공통영어	General English												
영어I	English 1	A	4	A	4								
영어II	English 2					B	3	A	3	B	5	A	5
영어독해	English Reader												
독어I	German 1												
종교	Religion(Bible)												
		Credits Total(총이수단위) : 200				Average Grade(평점 평균) : 4.2/5.0							

Grade	Descriptive	marks
A	Excellent	5
B	Good	4
C	Average	3
D	Fair	2
E	Poor	1

I Certify that this is a true and correct copy of the original.

Mr.Jun-Yang Lee :
(Principal)

(Official Seal)

DIPLOMA IN NURSING (PAGE 1)

SEOUL
WOMEN'S COLLEGE OF NURSING
287-89 Hong Je Dong, Seo-Dae-Moon Gu,
Seoul, Korea 120-742
Tel : 395-8011~6 Fax: 395-8018

No . 2004 - 482 June 03, 2004

CERTIFICATE OF GRADUATION

Name in Full	:	[redacted]
Date of Birth	:	August 23, 1960
Department	:	NURSING
Date of Admission	:	March 06, 1980
Date of Graduation	:	February 25, 1983

Having satisfactorily completed the three year course in theory and practice.

SOON OK HA
Dean of
Seoul Women's College of Nursing

DIPLOMA IN NURSING (PAGE 2)

Sample: Diploma in Nursing, 1983 (Page 2)

SEOUL
WOMEN'S COLLEGE OF NURSING
287-89 Hong Je Dong, Seo-Dae-Moon Gu,
Seoul, Korea 120-742
Tel : 395-8011~5 Fax : 395-8018

Date : JUN. 03, 2004

Name in Full : [redacted]
Date of Birth : AUG. 23, 1960
Date of Admission : MAR. 06, 1980
Date of Graduation : FEB. 25, 1983

Subjects	Grade			Instruction	practice		Remarks
	1st Yr.	2nd Yr.	3rd Yr.	Hours	Hours	Weeks	
Korean Literature	B			32(2)			
English	B			96(6)			
German				48(3)			
Sociology		C		16(1)			
Philosophy		B		16(1)	32		
Anatomy & Physiology	B			128(8)	16		
Microbiology	D			64(4)	16		Lab. Experience
Pharmacology	C			64(4)	16		
Pathology	D			64(4)	16		
Nutrition & Diet Therapy				32(2)			
Principle of Education	C			16(1)			
Educational Psychology	C			16(1)			
* History	B			16(1)			
* Evaluation		B		16(1)			
* Methodology				16(1)			
* Sociology		C		16(1)			
History of Nursing	C			32(2)			
Nursing Ethics	C			16(1)			
Professional Adjustment			C	16(1)			
Fundamentals Nursing	C			64(4)	128		Lab. & Ward Practice
Nursing Administration			C	16(1)	40	1	
Med. & Med. Nursing		D	D	128(8)	320	8	
Surg. & Surg. Nursing		D	D	128(8)	320	8	
Pediatric & Pediatric Nursing		D	B	96(6)	160	4	
Gyn. & Obs. Nursing		C	B	96(6)	240	6	
Psychology & Psychiatric Nursing		C	C	96(6)	160	4	Clinical Practice
Urological Nursing		D		16(1)	40	1	
Dental Nursing			D	16(1)	40	1	
E.N.T. & Nursing		D		16(1)	40	1	
Eye & Nursing		D		16(1)	40	1	
Dermatology & Nursing			D	16(1)	40	1	
Public Health & P.H. Nursing		C	C	96(6)	160	4	Public Health Center & Field Practice
Physical Education	A	B		32(2)			

Remarks : A=100~90, B=89~80, C=79~70, D=69~60,
Lowest Passing Grade = D

This is to certify that the above transcript is authentic and correct copy of the original filed in our office and there is no false nor error in this transcript.

Ha Soon Ok

SOON OK HA
Dean of
Seoul Women's College of Nursing

DIPLOMA IN DENTAL LABORATORY TECHNOLOGY (PAGE 1)

COLLEGE OF HEALTH SCIENCES,

KOREA UNIVERSITY

1 Jeogneung-Dong, Sungbuk-Ku, Seoul, 136-703, Korea
Phone (02) 940-2700 Fax (02) 916-5943

No. 2004 - 63 November 18, 2004

CERTIFICATE

Name in Full	[redacted]
Date of Birth	December 1, 1972
Department	Dental Laboratory Technology
Date of Admission	March 1, 1992
Degree to Received	Diploma in Dental Laboratory Technology

This is to certify that the above - mentioned person is to graduate from the Department of Dental Laboratory Technology, Junior College of Allied Health Sciences, Korea University on February 24, 1996.

Chang-Kyou Lee
Dean

DIPLOMA IN DENTAL LABORATORY TECHNOLOGY (PAGE 2)

COLLEGE OF HEALTH SCIENCES,

KOREA UNIVERSITY

1 Jeongneung-Dong, Sungbuk-Ku, Seoul, 136-703, Korea
Phone (02) 940-2700 Fax (02) 916-5943

ACADEMIC TRANSCRIPT

Date Issued: November 18, 2004
Serial No.: 2004 - 63

Name in Full : [redacted]	Junior College of Allied Health Sciences
Sex : Male	Department : Dental Laboratory Technology
Date of Birth : December 1, 1972	Date of Graduation : February 24, 1996
Date of Admission : March 1, 1992	Degree Received : Diploma in Dental Laboratory Technology

Title Of Course	Grade	Credits
1992 1ST SEMESTER		
DENTAL MORPHOLOGY	A	2
DENTAL MORPHOLOGY AND OCCLUSION, LAB. WORK 1-A	A+	2
OPERATIVE DENTISTRY, LAB. TECHNOLOGY I	B+	1
FIXED PROTHODONTICS, LAB. TECHNOLOGY I-A	A	2
DENTAL MATERIALS I	B+	3
DENTAL ANATOMY	B+	3
INTRODUCTION TO DENTISTRY	A	2
INTRODUCTION TO PHILOSOPHY	B	2
KOREAN	D	2
BASIC COMPUTER SCIENCE	A+	2
PSYCHOLOGY	B	2
TNC : 23.0 GPA : 3.50		
1992 2ND SEMESTER		
INLAY, LAB. TECHNOLOGY I-B	B+	1
INLAY, LAB. WORK	B+	2
CROWN AND BRIDGE TECHNOLOGY I-B	B+	1
CROWN AND BRIDGE TECHNOLOGY, LAB. I	A	2
REMOVABLE PARTIAL PROTHODONTICS, LAB. TECHNOLOGY I	C+	2
COMPLETE DENTURE PROTHODONTICS, LAB. TECHNOLOGY I	A+	2
DENTAL MATERIALS, LAB. TECHNOLOGY I-B	B	2
DENTAL MORPHOLOGY AND OCCLUSION, LAB. WORK 1-B	C	2
CULTURAL HISTORY	B	2
MEDICAL TERMINOLOGY	B+	2
JAPANESE	A	2
TNC : 20.0 GPA : 3.35		
1993 1ST SEMESTER		
CROWN AND BRIDGE TECHNOLOGY II-A	C+	2
CROWN AND BRIDGE TECHNOLOGY, LAB. II-A	B+	2
PARTIAL DENTURE TECHNOLOGY LAB. II-A	A	2
PARTIAL DENTURE TECHNOLOGY II-A	A+	2
COMPLETE DENTURE TECHNOLOGY LAB. II-A	A	2
COMPLETE DENTURE TECHNOLOGY II-A	C+	2
DENTAL CERAMICS, LAB. TECHNOLOGY	C+	2
DENTAL CERAMICS, LAB. WORK	B+	2
ORTHODONTICS, LAB. TECHNOLOGY AND LAB. WORK	B+	3
ENGLISH II	A+	2
TNC : 21.0 GPA : 3.50		
1995 2ND SEMESTER		
CROWN AND BRIDGE TECHNOLOGY III	B	2
PARTIAL DENTURE TECHNOLOGY 2-B	B	1
PARTIAL DENTURE TECHNOLOGY, LAB. 2-B	B	2
COMPLETE DENTURE TECHNOLOGY 2-B	B	1
COMPLETE DENTURE TECHNOLOGY, LAB. 2-B	B+	2
CLINIC PRACTICE	C+	3
COMPREHENSION OF DENTAL TECHNOLOGY	C+	2
DENTAL HEALTH SCIENCE	C+	2
OCCLUSAL WAXING I	B	2

Title Of Course	Grade	Credits
1995 2ND SEMESTER		
HEALTH RELATED LAW	A	2
TNC : 19.0 GPA : 2.97		
The End		

Total Credits : 83
G. P. A. : 3.34(Maximum: 4.50)
G.P.A.(a 100-point scale) : 86.74

Seal

Chang-Kyou Lee
Dean

BACHELOR OF HEALTH SCIENCE (PAGE 1)

한서대학교
HANSEO UNIVERSITY

HANSEO UNIVERSITY
360 DAEGOK-RI, HAEMI-MYON
SEOSAN-SI, CHUNGNAM 356-706
SOUTH KOREA
Tel. (82) (41) 660-1111-8
Fax. (82) (41) 660-1119

Certificate No.07-00200 DATE : February 7, 2007

CERTIFICATE OF GRADUATION

Name in Full [redacted]
Sex : Female
Date of Birth : February 15, 1984
Student No [redacted]
Date of Admission : February 27, 2002
Date of Graduation : February 23, 2006
Department : Occupational Therapy

This is to certify that the above named person has graduated from Hanseo University, receiving the degree of : Bachelor of health Science

S. G. Lee
Seung Gil Lee, Ph.D

Dean of Academic Affairs
Hanseo University

THIS CERTIFICATION IS VALID ONLY WHEN IT BEARS THE EMBOSSED SEAL OF HANSEO UNIVERSITY AND THE SIGNATURE OF THE DEAN OF ACADEMIC AFFAIRS.

BACHELOR OF HEALTH SCIENCE (PAGE 2)

HANSEO UNIVERSITY

한서대학교 HANSEO UNIVERSITY

360 DAEGOK-RI, HAEMI-MYON
SEOSAN-SI, CHUNGNAM 356-706
SOUTH KOREA
Tel. (82) (41) 660-1111-8
Fax. (82) (41) 660-1119

Certificate No. 07-00201

DATE : February 7, 2007

TRANSCRIPT OF ACADEMIC RECORD

Name in Full : [redacted] Student No : [redacted] Sex : Female

Department : Occupational Therapy Student Status : Graduated

Description	Credits	Grade
1st Semester 2002		
Introduction to Occupational Therapy	3	A+
Medical Terminology	3	A+
General Chemistry and Lab I	4	B+
English Lab	1	A+
General Computer Science	1	A+
English I	3	A
General Physics and Lab I	4	B+
General Biology and Lab I	4	B+
Credit total :19 Average : 3.95		
2nd Semester 2002		
Anatomy	4	A
Social Psychology	3	A+
Daily Diet and Health	3	A
General Biology and Lab II	4	A
Computer application	2	A
English II	3	A+
Health of Oriental Medicine	3	A
Psychology of Counseling	3	A+
Credit total :23 Average : 4.17		
1st Semester 2003		
Human Physiology	4	A+
Understanding Psychology	3	A
Understanding Sociology	3	A
Functional Anatomy	3	A
Pathology	3	A+
Activities of Daily Living	3	A
Occupational therapy assessment	3	A
Personality Psychology	3	A+
Credit total :24 Average : 4.19		
2nd Semester 2003		
Emergency care and Bandaging	3	A
Psychiatry	3	A+
English Conversation II	2	A
Education of the talented and gifted and the special	3	A+
Kinesiology	3	A
Introduction to Rehabilitation Medicine	3	A+
Neuroanatomy	3	B+
Physical Examination Procedures	3	B+
Statistics in Public Health	3	A+
Credit total :24 Average : 4.10		
1st Semester 2004		
Occupational therapy in pediatrics I	3	A
Psychosocial Occupational Therapy I	3	A+
Occupational Therapy in Physical Disabilities I	3	B+
Therapeutic Exercise	3	B+
English songs and poem	2	A+
Activity analysis I	3	A+
Clinical Neurology	3	A
Credit total :21 Average : 4.07		
2nd Semester 2004		
Research Methodology I	3	A
Orthotics and Prosthetics	3	B+
Occupational therapy in pediatrics II	3	A
Activity analysis II	3	A+

Description	Credits	Grade
Occupational Therapy in Physical Disabilities II	3	A
Psychosocial Occupational Therapy II	3	A
Credit total :18 Average : 4.00		
1st Semester 2005		
Occupational Therapy Clinical Field work I	3	A+
Occupational Therapy Clinical Field work II	3	A+
Occupational Therapy Clinical Field work III	3	A+
Occupational Therapy Clinical Field work IV	3	A+
Occupational Therapy Clinical Field work V	3	A+
Occupational Therapy Clinical Field work VI	2	A+
Credit total :17 Average : 4.50		
2nd Semester 2005		
Occupational therapy in geriatrics gerontology	3	A
Community Service Education	1	P
Teaching English to young learners I	3	A+
Health administration public law	3	A+
Public Health Science	3	A+
Thesis	3	A+
Rehabilitation technology	3	A
Credit total :19 Average : 4.33		

A+ : 4.5(100-95) A : 4.0(94-90) B+ : 3.5(89-85) B : 3.0(84-80) C+ : 2.5(79-75) C : 2.0(74-70) D+ : 1.5(69-65) D : 1.0(64-60) F : 0(59-0)

S. G. Lee

Seung Gil Lee, Ph.D

Dean of Academic Affairs

Hanseo University

THIS CERTIFICATION IS VALID ONLY WHEN IT BEARS THE EMBOSSED SEAL OF HANSEO UNIVERSITY AND THE SIGNATURE OF THE DEAN OF ACADEMIC AFFAIRS

MASTER OF SCIENCE IN NURSING (PAGE 1)

Seoul National University

No. : 008897 Date : April 22, 2004

Subject	:	Degree Certificate
Name in Full	:	[redacted]
Date of Birth	:	April 10, 1960
Date of Admission	:	March 1, 1985
Date of Degree Conferment	:	August 31, 1987
Department	:	Dept.of Nursing
Degree Conferred	:	Master of Science in Nursing

This is to certify that the above mentioned received the Master of Science in Nursing Degree from the Graduate School(Master Course), Seoul National University

Woochul Kim Ph.D.
Dean of Academic Affairs
Seoul National University

MASTER OF SCIENCE IN NURSING (PAGE 2)

SEOUL NATIONAL UNIVERSITY
San 56-1 Shillim-dong, Kwanak-gu, Seoul 151-742, Korea

Date Issued : April 22, 2004
Serial No : 008897

Name : [redacted]
Student No. : 85811-503
Date of Birth : April 10, 1960
Date of Admission : March 1, 1985

Graduate School(Master Course)
Dept.of Nursing
Date of Degree Conferment : August 31, 1987
Degree Conferred : Master of Science in Nursing

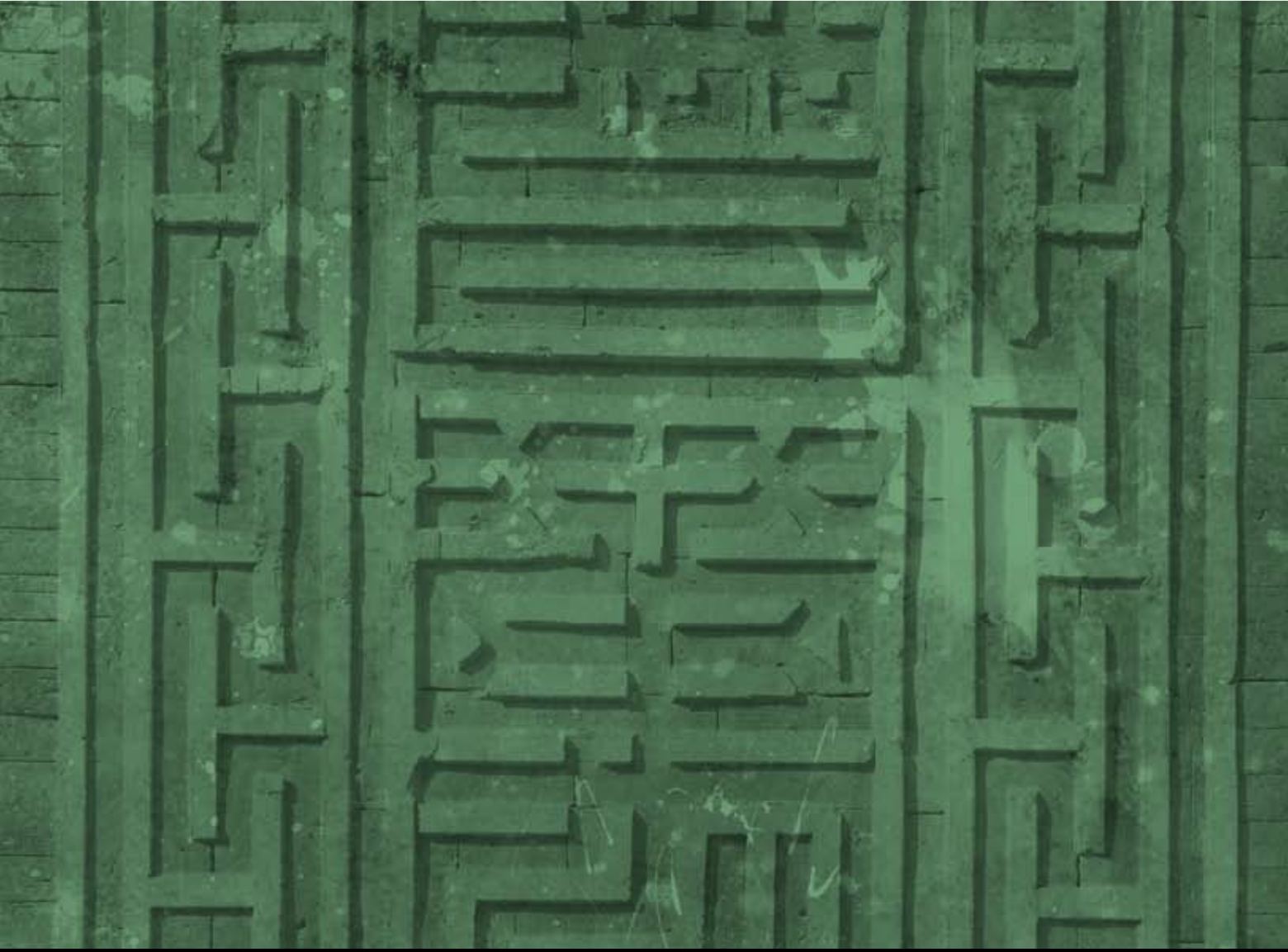
SUBJECT	CREDITS	GRADE
1985 1ST SEMESTER		
Nursing Theory I	3	A-
Intermediate Statistics	3	A-
Staffing in Nursing	3	A-
TAC : 9 GPA : 3.70		
1985 2ND SEMESTER		
Nursing Research Methodology I	3	B0
Seminar in Advanced Parent-child Nursing	3	A-
Curriculum Development in Nursing	3	B+
TAC : 9 GPA : 3.33		
1986 1ST SEMESTER		
Philosophy of Nursing	3	B+
Teaching Method & Practice	3	A0
Clinical Nursing Assessment	3	A-
Research for the Master's Degree	2	S
TAC : 11 GPA : 3.66		
1986 2ND SEMESTER		
Chronic Health Condition and Nursing	3	A0
Research for the Master's Degree	2	S
TAC : 5 GPA : 4.00		

Master's Thesis	8
Total Number of Credits	34
Course Credits	30
Research Credit(s)	4
Grade Point	108.30
Grade Point Average	3.61
Percentage Equivalent	92.10

Remarks:
1. Hours-per-Week:
   One hour class work per week for 1 semester makes 1 credit, two or more hours of laboratory work per week for 1 semester make 1 credit.
2. Weeks-per-Year:
   16 Weeks make 1 semester and 2 semester one academic year.
3. Required Credits:
   Minimum credits.
4. Following subclassified grade point system is in effect since the 1972 academic year.
   A+ 4.3 B+ 3.3 C+ 2.3 D+ 1.3 F Failure S Satisfactory
   A0 4.0 B0 3.0 C0 2.0 D0 1.0 I Incomplete U Unsatisfactory
   A- 3.7 B- 2.7 C- 1.7 D- 0.7
5. Grades A,B,C and D assigned before 1972 are deemed A0,B0,C0 and D0 respectively.
   A 3.0 B 2.0 C 1.0 D 0.0 F Failure
6. Lowest Passing grade point average for graduation is 3.0

Seal

Woochul Kim Ph.D.
Dean of Academic Affairs
Seoul National University



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