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ECTS Guidebook 1999-2000: Greetings from the Director

I would like to congratulate you on the place you have achieved at Kemi-Tornio Polytechnic. You are no doubt aware of the work and the challenges ahead of you; however, you can rest assured that the efforts you and your fellow students will make here, individually and together, will be rewarding and fulfilling in terms of furthering your professional and other skills in the future. I would therefore like to heartily welcome you to our team!

Kemi-Tornio Polytechnic prides itself on the success with which it has striven for a competitive edge. Our operations began as a polytechnic in 1997, and we achieved our first expansion (into the cultural sector) the year after. The five units, as they are known within the institute, are in the sectors of technology, business and management, social work, health care and culture. The range of disciplines dealt with in the polytechnic means that young people come here to study with the aim of becoming engineers, BBAs, nurses, public health nurses, physiotherapists, social work professionals, visual and media artists. There are excellent opportunities to attend courses from other units in a flexible, versatile manner.

Special emphasis has been placed on the quality aspects behind education and the operations of the polytechnic. The student is viewed as a client and customer who must receive a high quality of service. In practice this means using multiform educational methods, as well as regular dialogue with and collection of feedback from the students. The Quality Handbook of Kemi-Tornio Polytechnic has been approved and put into active use with this in mind; and the quality of education and training is under a continuous process of assessment and improvement (an example of this being the internal assessment conducted by the units themselves in 1998). We also participate in the external assessments carried out by the Finnish Ministry of Education.

The activities of the Student Union (Ketoakku) are valuable and deserve the full support of the directors of Kemi-Tornio Polytechnic. With its own office and a full-time secretary general, the Union has found it possible to generate and improve these activities from both an ideological and a commercial point of view. There are very important reasons for having such a focus of student activity; too often we find that especially new students are only aware of what is going on in their own unit. The other units and indeed the polytechnic as a whole will become more familiar if you participate in the activities run collectively by the Student Union. This is an excellent way of expanding your circle of friends and of ensuring that your stay in the Kemi-Tornio area is even more enjoyable.

I hope that you will find applying yourself to your studies a stimulating and rewarding experience here in the polytechnic, and that you will avail yourself of the opportunities that we provide for building your future; you can rely on the support we will give you and the efforts we will make on your behalf. To this end, I hope that this ECTS Study Guide will provide you with valuable help for carrying out your studies. I wish you the best of success in the coming academic year and beyond.

Yours,
Hannu Törmä
Ph.D. (econ.)
Director

1. GENERAL ECTS INFORMATION

What is ECTS?

ECTS, the European Credit Transfer System, was developed by the Commission of the European Communities. The aim of ECTS is to provide common procedures to guarantee academic recognition of studies abroad. It also provides a way of measuring and comparing learning achievements, and transferring them from one institution to another through the use of common ECTS credits and ECTS grading scale. ECTS also provides a better access to information on foreign curricula.

The ECTS system is based on three core elements: (1) the information package which provides general information on the host institution as well as detailed descriptions of the degree programmes and courses available; (2) the application form and learning agreement which describes the programme of study abroad and is drawn up by the individual student and institutions involved before the student goes abroad; (3) the transcript of records shows the learning achievements of the student prior to and after the period abroad. It also shows every course taken by the student and the number of ECTS credits completed as well as including the grades according to the local and ECTS grading scale.

The ECTS system concerns mainly those educational institutions which have the Institutional Contract (IC) and, therefore, also mainly ERASMUS students. However, also other international exchange students are welcome to take advantage of this guide when planning and carrying out their studies.

ECTS credits and grades

ECTS credits are a numerical value allocated to course units to describe the student workload required to complete them. ECTS credits reflect the quantity of work each course requires in relation to the total quantity of workload required to complete a full year of academic study at the institution, for example lectures, practical work, seminars, independent study – in the library or at home – and examinations or other assessment activities. ECTS is thus based on a full student workload and not limited to contact hours only. In ECTS, 60 credits represent the workload for a full academic year of study; normally 30 credits are given for a semester and 20 credits for a term.

Examination and assessment results are usually expressed in grades. There are many different grading systems in Europe. The ECTS grading scale has been developed in order to help institutions translate the grades awarded by exchange students. This provides additional information on the student's performance to that provided by the institution's grade but does not replace the local grade. Higher education institutions make their own decisions on how to apply the ECTS grading scale to their own system.

ECTS/ERASMUS students

Usually students participating in the ECTS programme will attend a single host institution in a single EU member state, study there for a limited period and then return to their home institution. It is also possible to stay at the host institution and earn a degree there or even proceed to the

third institution to continue studies. In all three cases students will be required to comply with the legal and institutional requirements of the country and the institution where they take their degrees.

Students participating in the ECTS programme will receive full credits for all academic work successfully carried out at any of the ECTS partner institutions. They will be able to transfer these academic credits from one participating institution to another on the basis of prior agreement on the content of study programmes abroad between students and the institutions involved. Transfer of credits will take place when students complete the programme of study at the host institution and return to their home institution. Because of the ECTS system a student will be able to continue the study programme without any loss of time or credit.

Students selected by each institution to participate in the ECTS programme are entitled to a student mobility grant if they fulfil the general conditions of eligibility for the ERASMUS grant. The requirements are:

- Students must be citizens of an EU member state or citizens of an EFTA member state or citizens of the following countries: Cyprus, Poland, Romania, Slovakia, Slovenia, Hungary, Bulgaria, The Czech Republic, Lithuania, Latvia and Estonia.
- Students shall not be required to pay a tuition fee at the host institution. The student may, however, be required to continue to pay his /her normal tuition fees to the home institution during the stay abroad.
- The national grant/loan to which a student may be entitled for study at his/her institution may not be discontinued, interrupted or reduced while the student is studying in another Member State and is receiving ERASMUS grants. (Insurance premiums, student social contributions and material costs do not count as tuition fees at the host institution).
- The period of study at the host institution may not last less than three months nor more than a year.

ECTS in Kemi-Tornio Polytechnic

The general principles of the ECTS system are complied with in the Kemi-Tornio Polytechnic. The polytechnic cooperates with institutions of higher education in Europe, Russia, the United States and China. Several international exchange programmes (Socrates, Leonardo da Vinci and Nordplus) help students and staff to find places abroad, as well as assisting foreign students in coming to the Kemi-Tornio Polytechnic. Due to the polytechnic's commitment to both internationalism and student and staff exchange, it has become more important to guarantee academic recognition of studies abroad.

The ECTS programme does not include any special ECTS courses. There are both degree and non-degree programmes in English in Kemi-Tornio Polytechnic

The degree programmes in English are:

- Cross-Border Engineering (240 ECTS credits/160 credits)
- Euro-Economics Education (210 ECTS credits/140 credits)
- Information Systems Specialist Education (210 ECTS credits/140 credits)
- Degree Programme in Health Care and Nursing (210 ECTS credits/140 credits)

The international non-degree programmes in English are:

- Gateway Education (30 ECTS credits/20 credits)
- Euro-Arctic Tourism Education (30 ECTS credits/20 credits)

In addition a Degree Programme in Social Education and Social Care and one in Visual and Media Arts are introduced in this guide although they are taught in Finnish. More detailed information on the education programmes will be provided later. The Kemi-Tornio Polytechnic's ECTS guide is also available on the Internet: <http://www.tokem.fi/amk/ects/>

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2. FINLAND

Finland in brief

History

Finland and the Finnish national consciousness have been moulded by the country's location between East and West. In the 13th century Finland became a part of the kingdom of Sweden and remained so for several centuries. Finns fought in the Swedish army in many wars, often against Russia. In 1809, after Sweden had lost the war with Russia, Finland was ceded to Russia and became an autonomous Grand Duchy within Tsarist Russia, its Grand Duke being the Tsar himself. During the 19th century Finnish national feeling grew stronger. In 1906 Finland succeeded in establishing a new constitution based on equal and universal suffrage; Finnish women were the first in Europe to be given the vote. After the October Revolution in Russia (1917), Finland declared itself independent on 6th December 1917.

During World War II Finland managed to retain its independence in the so called "Winter War" and "Continuation War" against Russia. Since the war Finland has pursued a policy of neutrality and military non-alliance. Finland is a parliamentary republic with a multiparty political system. Human welfare and high technology are highly important issues in the Finland of today. Finland has been a member of the European Union since the beginning of 1995 and will assume the presidency of the European Union Council in July 1999.

Geography

Finland is situated in northern Europe between the 60th and 70th parallels of latitude. The total land area is approx. 338 000 square kilometres. The quarter of its total area lies north of the Arctic Circle. Finland's neighbouring countries are Sweden to the west, Norway to the north, Russia to the east and Estonia to the south, across the Gulf of Bothnia. Much of the country is lowland but high rounded fells form the landscape in the most northern part of the country, Lapland. Other outstanding features of Finland's scenery are its myriad lakes and islands.

People

The population of Finland is a little over 5 million. About 500 000 people live in the capital, Helsinki. The overall population density is 16 persons per square kilometre, yet the density in southern Finland, in the capital area, is almost 136 persons per square kilometre. The official languages are Finnish and Swedish. Most of the people speak Finnish; Swedish is spoken as a mother tongue by about 6% of the people. Approximately 90% of the people are Lutherans while just under 1% belong to the Finnish Orthodox Church.

Climate

The climate is marked by cold winters and warm summers but temperatures in winter are moderated by the influence of the Baltic Sea and west winds from the Atlantic warmed by the Gulf Stream. The mean annual temperature is about 5.5°C in southwestern Finland, decreasing towards the northeast. In winter, the mean temperature remains below 0°C. Winter usually begins in mid-October in Lapland and during November in the rest of Finland. In summer, the mean daily temperature is consistently above 10°C. Summer usually begins in late May in southern

Finland and lasts until mid-September. Summer in Lapland starts in June and ends a month earlier than on the south coast. In spite of the Kemi-Tornio region's northern location the climate in the region is still mild due to the effects of the Gulf Stream. The average temperature of the year is about +2°C, in July from +15 to +18°C and in February from -10 to -15°C. Snow covers the area from the early of November until the end of April.

Kemi-Tornio region

Kemi

Kemi is one of the oldest permanently-inhabited areas in Finland. The city itself, which grew up around the wood-processing industry, was founded on 5th March, 1869. The population of the city is about 24 000 and the land area of the city is 90,7 square kilometres.

Kemi concentrates mainly on wood industry and is the most important industrial city in Lapland for almost half of Lapland's industry is located in Kemi. Besides the wood-processing industry the city of Kemi has begun to encourage new industries. The number of high-tech industries, dealing for example with information and environment technology, has increased, and Kemi's geographical position offers many possibilities for developing tourism. Kemi is Lapland's sea town, sometimes called Lapland's gateway to the south, with two active deep water harbours which operate throughout the year. In the 1980s Kemi also developed into a service and education centre of the province.

Tornio

The two neighbouring towns of Tornio in Finland and Haparanda in Sweden have a long history in common. In 1809 the border between Sweden and Russia was drawn up along the Tornio-Muonio River and the 17th-century trading town of Tornio was divided into two. Tornio is situated at the end of the Gulf of Bothnia in northern Finland. Tornio received its town charter in 1621 and since then it has served not only the entire Tornio river valley but also, to a large extent, Lapland. Tornio has been one of the most famous market centres of Northern Scandinavia since the Middle Ages. The population of the city is about 23 000 and the surface area of the city is 1227 square kilometres.

The main means of livelihood in the area are industry and services. The Outokumpu steel factory, situated in Tornio, is nationally important and the steel produced there is of world-class standard. Tornio's oldest industrial enterprise is the Hartwall Brewery which produces Lapin Kulta beer. Also some textile industry is situated in Tornio.

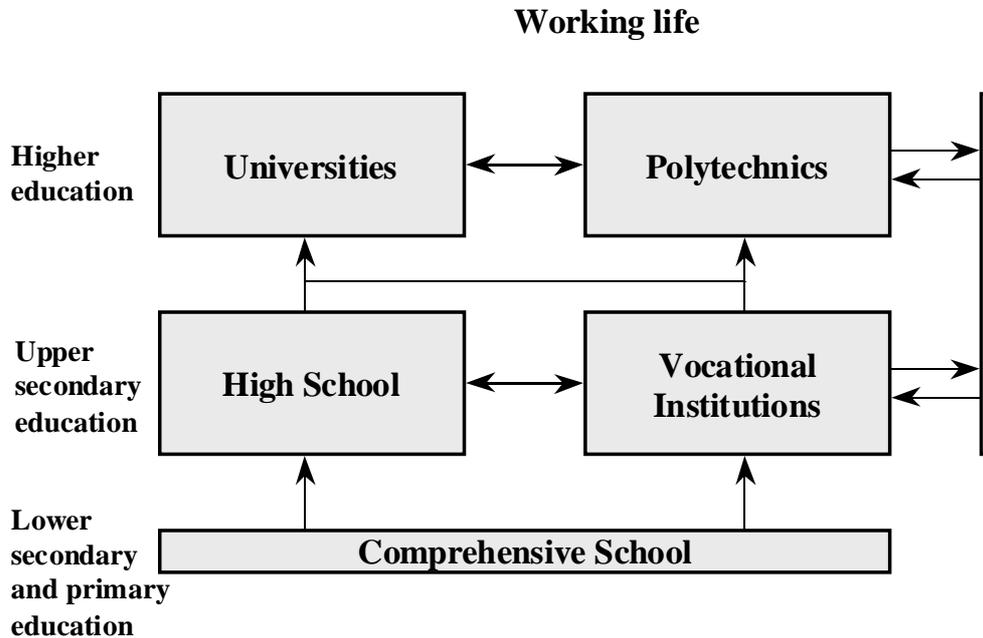
Regional cooperation

The towns of Kemi and Tornio, as well as Haparanda across the border in Sweden, have a combined population of approximately 75.000. Today the region has an important role as a link between East and West, as well as the North and the South of Europe.

In addition to the geographical location these towns share, the region has several common cooperation actions. The interaction between the towns is constant especially in terms of economic life. For example the Kemi-Tornio Area Development Agency promotes the interests of the area and coordinates the development of industries and services by voluntary cooperation between the municipalities.

3. INFORMATION ON THE FINNISH EDUCATIONAL SYSTEM

The Finnish educational system in a nutshell



All children receive compulsory basic education at comprehensive schools between the ages of 7 and 16. After completing the comprehensive school education is voluntary. Students may go to the upper secondary school which, provides three years of general education, or to vocational education lasting from two to five years. These education forms give a general qualification for both polytechnic and university studies.

Credits and Grades

Finnish undergraduate education is organised according to a national credit system. The quantity of student's workload is measured in credits. One credit represents approximately 40 hours of work. One academic year's full-time study is equivalent to 40 credits. Converting Finnish credits to ECTS credits simply means multiplying the Finnish credit value by a factor of 1.5 to obtain the equivalent ECTS credit value; for example for a full academic year of study the student obtains 40 Finnish credits which is equivalent to 60 ECTS credits.

Examination and assessment results are usually expressed in grades. The national grading scale for polytechnic studies is **1-5**. The grade 5 means that the student's performance was excellent and correspondingly the grade 1 means satisfactory/sufficient. Sometimes results can be expressed verbally: **passed/failed**.

GRADING SCALE		
ECTS scale		Local scale
A	Excellent	5
B	Very Good	4
C	Good	3
D	Satisfactory	2
E	Sufficient	1
FX	Fail	Fail
F	Fail	

Excellent - outstanding performance with only minor errors.

Very good - above the average standard but with some errors.

Good - generally sound work with a number of notable errors.

Satisfactory - fair but with significant shortcomings.

Sufficient - performance meets the minimum criteria.

Fail - some more work is required before the credit can be awarded.

Fail - considerable further work is required.

Polytechnics in the educational system

The Polytechnic Act was passed by Parliament at the beginning of 1995. In Finland polytechnics form a non-university sector which operates alongside the university sector. The principles underlying polytechnic education derive from the need for a highly-trained expert work force in the labour market. This is why polytechnics offer a more practical alternative to university education. Courses differ from those at university in that they reflect the practical needs of working life and therefore polytechnics have numerous links with local business and communities. It can be said that in polytechnic education there are theory and practice in balance. Internationalization is one of the polytechnic's main development priorities, and international experience can be gained either by taking study courses or through on-the-job training abroad.

The extent of polytechnic degree programmes is usually 140 or 160 credits and the duration of studies is from 3.5 to 4 years. Degree programmes consist of basic studies, professional studies, elective studies, practical training, and a bachelor's thesis. The degree programmes also include communication and language studies. Polytechnics also provide non-degree programmes on different kind of topics.

The minimum admission requirements for polytechnics is one of the following:

- upper secondary education
- matriculation examination
- the International Baccalaureate exam
- the *Reifepriifung* exam
- at least three years basic vocational education.

In addition, polytechnics arrange their own aptitude tests in many disciplines.

4. KEMI-TORNIO POLYTECHNIC

General description of the Polytechnic

Kemi-Tornio Polytechnic was established in August 1992 and received its permanent status in August 1997. The Polytechnic is situated in Finnish Lapland, near the Swedish border. The polytechnic is made up of five units which specialise in different areas of education. These units are located in the neighbouring towns of Kemi and Tornio. The strength of Kemi and Tornio lies in their location in Northern Finland; the polytechnic is a gateway between the Barents region in Northern Russia and the rest of Europe. Administration is entrusted to an administrative board, whose members include representatives of the municipalities of Kemi and Tornio, the representatives of the staff and the student body. The polytechnic has a Director who is responsible for implementing the decisions of the Administrative Board.

At the moment there are about 2300 students in the Kemi-Tornio Polytechnic and the staff consists of approximately 270 persons. A Finnish polytechnic degree is equivalent to degrees obtained in corresponding institutes of higher education in other European countries. In the Kemi-Tornio Polytechnic as in all the Finnish polytechnics, studies are organised into degree programmes, and the education places weight on contacts with business, industry and services, especially at the organisational level. The polytechnic degrees are designed to meet the changing requirements and development needs of the world of work, having a pronounced professional emphasis, and qualifying graduates for various expert duties. The guiding principles of the polytechnic's curriculum are internationalism, multidisciplinaryism, professional skills and students placement in working life.

Polytechnic studies require students to demonstrate independent initiative and take responsibility for their own study results. It is possible for students to choose courses from different education units and programmes within the polytechnic, for instance individual courses can be chosen also from non-degree programs as well as from degree programs. In addition, through domestic and international cooperation with other education institutes a wide range of study opportunities are achieved and students are able to carry out their personal study plans based on their own needs. In polytechnic studies several teaching and learning methods are used, for example lectures, practical work, teamwork, seminars, workshops and independent study. Also projects dealing with different kind of topics are carried out in cooperation with working life.

The Director's Office

The Director's Office is the administrative centre of the Kemi-Tornio Polytechnic and it is situated in Kemi. The permanent staff of the office consists of about 20 members, however a variable amount of temporary staff is needed. The administrative personnel including the director, secretaries, International Relations Officer, Study Affairs Officer etc. have their offices there. Also financial administration, marketing and public relations, as well as main EDP planning etc. are taken care of by the staff of the Director's Office.

The learning centre, which provides library and information services, and additionally looks after some projects dealing with the fields mentioned above, is also located in the Director's Office. The career and recruiting centre has an office in the Director's Office and also one in Tornio. The centre works as a link between the polytechnic's students and working life. One of its main aims is to promote cooperation and networking between the polytechnic and the world

of employment. For students, it provides education and concrete help with the job-seeking process, and for firms it is a good way to recruit a skilled workforce.

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The International Department and cooperation

The role of the International Department is to create and develop the polytechnic's internationalization strategy. It is responsible for linking international operations to the polytechnic's studies and research. The International Department of the polytechnic participates in and coordinates several national and international projects. An important part of them is research and development projects related to the information society largely funded by the EU. In this regard, cooperation with leading information and communications technology companies such as Sonera (formerly Finnish Telecom) and ICL is also highly important to the polytechnic. The projects also benefit the teaching by offering both further education possibilities for teachers, and traineeships or themes for the bachelor's thesis for students. Additionally, the department takes care of Leonardo da Vinci and Socrates Programmes' cooperation and develops the business and working life in the region.

The department staff consists of 16 members looking after 15 international projects. The staff has expertise especially in projects involving telematics, and was especially active in the 4th Framework Programme (Telematics Applications Programme) of the European Commission. This expertise is now concentrating on selected projects under the 5th Framework Programme. The projects deal with the following topics, for example Telematics Applications, Information Society Technology, Tourism, Tele-Health Care, Telemedicine, Distance Education, Collaborative Learning and Working, Teleworking, Rural Areas and Digital Sites.

The department has approximately 200 cooperation partners, for example in many EU countries, Norway, Russia, USA, Hungary, Slovakia, Israel, United Arab Emirates, China and Japan. The list of Erasmus partner schools is attached at the end of the guide.

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International Relations Officer Aira Rajamäki provides more detailed information on international education programmes (Socrates/Erasmus, Leonardo da Vinci and Nordplus) and advises on questions concerning both student and staff exchange.

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Research and development

The aim of research and development is first of all to support and improve teaching and learning and secondly to strengthen the relationship between the polytechnic and working life in the region and to improve entrepreneurship. The first aim includes activities like producing new material for education in networks and updating the existing material. This work is done by lecturers.

The other aim includes activities such as cooperating on projects to do with working life. The goal is to support the operation and productivity of enterprises and to acquire new know-how for these enterprises. For instance, developing a new computer system, conducting a market survey or developing a new piece of equipment in the production department often takes place. These projects are usually carried out by the students and they are supervised by the teachers and the staff from enterprises. Generally there is no extra staff for research and development activities in the education units of the polytechnic, although The International Department of the polytechnic is involved in such activities.

A bachelor's thesis is a piece of work where a student or a group of students present their know-how and skills in the field of specialisation. The volume of this work is 15 ECTS credits per student and it takes about half a year to complete it. Before the bachelor's thesis the students are trained in doing research and development. For instance in the educational field of business and administration, these R&D studies include project work, scientific writing and the basics of empirical research and development work. This last item includes research methods and analysis of work. The work is supervised by the senior teachers and other teachers. Native language teachers supervise scientific writing (reporting) and the main advisor controls the progress of the work. Bachelor's theses are usually written as projects and they are the most significant parts of research and development in the polytechnic. At a subsequent time the abstracts of such thesis work are made available to networks in English. The very best theses are further refined into publications (only in Finnish).

There are working several teams inside the polytechnic that are developing the internal processes of the institute. The results of this work are published in our own publication series. For instance developing the curriculum is a continuous process and it is done by the curriculum team. The most important teams are the quality team and research and development team.

Just now we are developing a common strategy for research and development. It seems likely that we will change the organisation of research and development work and concentrate on telematics and information society technology; and we are developing and utilising sophisticated information processing systems in this work. This is a very stimulating and fulfilling field of work.

Library and Information Services

<http://www.token.fi/amk/kirjasto/>

The Kemi-Tornio Polytechnic consists of six different units. Each of the units has its own library and in the Director's office there is a learning centre.

The services and collections are available to anyone; however the computers are only for the students and the staff of Kemi-Tornio Polytechnic. The students can use the computers for doing their Bachelor's thesis and other reports, for example.

The polytechnic has its own network, ToKemNet, which connects all six units and their libraries. From the workstations connected to the network it is possible to connect to the public libraries in the area, the polytechnic's own collection, various science library collections, online and CD-ROM databases and the Internet.

Opening times

Each library within the polytechnic has its own opening times. Unusual opening times (for instance during holidays) are announced, for example on notice boards and on the WWW notice board.

Library materials

The library consists of approximately 60,000 books, 750 domestic and international magazines and newspapers, and a growing audio-visual collection. All the documents are organised using a computer system called Pallas. The Kullero-database (<http://www.token.fi/amk/kirjasto/kullero.html>) is shared between the six units of the polytechnic, Kemi and Tornio public library and the College of West Lapland.

The library has access to various Finnish and foreign databases. The National Electronic Library (FinELib) offers a wide variety of information retrieval and document delivery services. Since the beginning of 1999 3000 electronic journals and databases have been available and, of them, over 1700 are full-text journals.

Borrowing

The library lends material for home use. Users of the library are required to have a library card, which must be presented when borrowing material. The facility is available using both the Kemi public library card and the polytechnic's own library card. The loan period is usually 14 days. The loan can be renewed if no reservations have been made for it. Overnight and weekend loans are possible (with a few exceptions) in the case of items from the reference collection.

It is also possible to renew or reserve the material via the Internet (<http://www.token.fi/amk/kirjasto/kullero.html>).

Distance borrowing/inter-library loans

Inter-library loans and copies of material not in the libraries' own collection may be obtained through interlibrary services. Through the Ariel programme it is possible to obtain articles from other libraries via the Internet. The public libraries in the area also provide inter-library loans. A fee is charged for photocopies and other services according to the library's service charge list.

Assistance and information services

The staff in the libraries are available to assist in the search for literature from different information sources.

When students first arrive at the polytechnic they are shown how to use the libraries and search for information. Students can use the databases themselves with guidance from the library staff. Usually the use of databases and information searches is free of charge. The fee is charged only for some foreign databases. You can ask for information search also via the Internet (www.token.fi/amk/muut/palvelut/tietopalvelupynt_/tiedonhakupynt_.html).

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The Unit of Technical Education

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The Unit of Health Care and Nursing

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The Unit of Cultural and Media Studies

(not an open library; library services are for staff and students of West Lapland Vocational Institute)

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Tel. +358 16 451 298, fax. +358 16 480 648

Hardware/software, telecommunication, teleservices

The Kemi-Tornio Polytechnic has about 800 PCs, Unix /NT Servers and NT workstations. All PCs have full Internet access. Several portable computers can be connected to the polytechnic's network and the Internet with GSM mobile phones. In addition opportunities to study and work through ISDN are provided. The polytechnic has five ISDN videoconference systems. Some members of the staff even use ISDN or ADSL-based connections and videoconference systems at home.

The polytechnic has its own 2Mb ISDN connection for remote PCs. For distance students the polytechnic has 20 PCs with ISDN cards and some of them also have the option of desktop videoconference located in the municipalities of Western Lapland. The polytechnic also has several UNIX, LINUX and NT servers with WWW database (Internet, Intranet).

Local libraries (cities, schools) are available in the polytechnic's Web-based library system. The polytechnic has several CD-ROM and online databases which can be used via the network.

The new ATM-based network technology is used between the units of the polytechnic, 32 Mbits/100 Mbits/155 Mbits. Our polytechnic is a part of the FUNET network (Internet of universities and polytechnics).

The polytechnic belongs to the Kemi-Tornio-Haparanda regional network which operates both in Finland and Sweden. A WWW-based connection to the student administration system will be introduced and it will provide students, for instance, with an opportunity to order extracts from the record of credits.

5. THE EDUCATION UNITS OF THE POLYTECHNIC

The Unit of Management and Commerce / The Unit of Business and Data Processing

The Unit of Business and Data Processing in Tornio and the Unit of Management and Commerce in Kemi give expertise in data-processing, the Internet, business administration, marketing, accounting and finance, logistics and tourism. The aim is to produce highly-skilled graduates for the Nordic Region and the international work market. New technology, multiplicity and distance learning are widely used.

A Bachelor of Business Administration combines theory, practice and individual experience, and qualifies graduates for planning, expert and managerial posts, as well as many professional tasks requiring a high standard of expertise. The business education is based on demands arising from business and industry. These abound; the business world is under constant pressure from changes, especially in the northern parts of Nordic Countries. Active and close contacts with business and industry guarantee that education lives in the real world. Doing R&D projects which originate from business and industry, students get first-hand knowledge of their professional field and working life realities. Enterprises in turn can commission research projects and studies at a low cost.

At total some 730 students study in day and evening programmes. The education field of management and business has a staff of 80. The business studies are characterized by their practical orientation and freedom of choice. BBA degree programmes take 3.5 years (210 ECTS credits/ 140 Finnish credits).

The Units offers five (5) degree programmes, with several specialisations available.

1. Business Administration

International Business Operations, Business Activities and Marketing, Economic and Technical Studies, Finance and Financial Management, Management Accounting, Data Management and Data Communication, Travel and Tourism Development, Marketing Communications and Telematics.

These are all in Finnish and not described in this guide.

2. Data processing

EDP analyst and System Planner, Software Expert and Instructor, Commercial Information Technologies (in Finnish, not in this guide).

Information System Specialist (language of instruction is English)

3. Euro-Economics Education (teaching is given in English)

4. Product Development and International Marketing

This programme is carried out in cooperation with the Unit of Technical Education.
In Finnish, not in this guide.

5. Logistics

In cooperation with the Unit of Technical Education.

In Finnish, not in this guide.

The Department of Adult Education in the field of management and business education arranges *circa* 22 000 hours annually. Modern technology is utilised in flexible and distance education. The courses offered are: Basic vocational education, Occupational courses for commerce and industry, On-the-job training courses, Employment courses, Open University and Polytechnic courses, Language carousel, Entrepreneurial Development Centre, MBA programme.

Both units provide library and information services in their own libraries. Students have a good opportunity to use computers, also outside the scheduled hours, to work with their assignments etc.

Postal address:

KEMI-TORNIO POLYTECHNIC
The Unit of Management and Commerce
Marina Takalon katu 3
94100 Kemi, Finland
Tel. +358 16 258214, fax +358 16 258 297
E-mail: info@tokem.fi

KEMI-TORNIO POLYTECHNIC
The Unit of Business and Data Processing
Kirkkokatu 10
95400 Tornio, Finland
Tel. +358 16 258 503, fax. +358 16 258 510
E-mail: info@tokem.fi

The Unit Coordinator for ECTS:

The Unit of Management and Commerce (EEE)
Mr. Esa Jauhola
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E-mail: esa.jauhola@tokem.fi

The Unit of Business and Data Processing (ISSE)
Ms. Riitta Alajärvi-Kauppi
Tel. +358 16 258 513, fax.+ 358 16 16 258 510
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International student exchange:

The Unit of Management and Commerce
Ms. Eeva-Kaarina Kari
Tel. + 358 16 258 230, fax + 358 16 258 297
E-mail: eevakaarina.kari@tokem.fi

The Unit of Business and Data Processing
Ms. Pirjo Alatalo
Tel. + 358 16 258 528, fax +358 16 258 510
E-mail: pirjo.alatalo@tokem.fi

The Unit of Technical Education

Kemi Institute of Technology, the predecessor of the Unit of Technical Education, was established in the year 1960; now the unit has a staff of 60 persons and number of students is about 800. The Unit of Technical Education in Kemi prepares technological experts for both domestic and international assignments in the fields of Mechanical Engineering, Electrical Power Engineering, Automation, Product Development and Information Technology. The unit is situated in the Technology Village and surrounded by hi-tech companies with expertise in various fields of technology. The unit runs its own Business Incubator, where experts help technological innovators to start their own companies.

The unit has run Bachelor of Engineering degree programmes since the early 80s. Now it runs, in addition to the programmes given in Finnish, two international programmes: Cross-Border Engineering Education is a 4-year degree programme having more than 100 students and Gateway is a one-term programme run annually during the spring term. In both programmes the tuition is given completely in English.

The unit has well-equipped laboratories for all its specialisation areas: machine construction, electrical power engineering, automation, and information technology. The unit has over 200 PCs for its students. The computer classes are open outside the scheduled hours for the students to work with their assignments. All the PCs are connected to the Internet.

The unit has a library which provides a wide range of material for both study and leisure. Also a large choice of textbooks, magazines, and databases in English is available. For those interested in sports the unit offers a good gym for working out and plying basketball, for example. The student union also has several clubs which you are more than welcome to join.

Postal address:

KEMI-TORNIO POLYTECHNIC
The Unit of Technical Education
Kiveliönkatu 36,
FIN 94600 KEMI
E-mail: ketol@tokem.fi
<http://www.ketol.tokem.fi>

Unit Director:

Mr. Matti Uusimäki
Tel. +358 16 258 801
E-mail: matti.uusimaki@tokem.fi

The Unit coordinator for ECTS:

Mr. Risto Mäkikyrö, Programme Manager
Tel. + 358 16 258 839, mobile phone: + 358 400 893 481
Fax. +358 16 258 875
E-mail: risto.makikyro@tokem.fi

International student exchange:

Ms. Ilona Savolainen
Tel. +358 16 258 848
E-mail: ilona.savolainen@tokem.fi

The Unit of Health Care and Nursing

The organisation and the activities of the Unit of Health Care and Nursing are based on the non-hierarchical structure of administration and teamwork. The Unit has a Director, an Adult Education Director, four principal lecturers and 23 lecturers. Other staff consists of 13 professionals of different areas. Many experts outside the Unit are also needed so as to deliver the high-quality education. The different teams have been formed in order to develop functional wholes e.g. quality of the provided education, health care research, practical training, content and structure of curriculum, international affairs, marketing, adult education. The students have named their representatives as members in the teams. In addition to these teams there is The Unit Management Team led by the Unit Director and the principal lecturers as members.

The Unit of Health Care and Nursing educates nurses, health visitors and physiotherapists in daytime programmes. An important feature of the Unit's activities is to provide educational programmes also for adults. Besides the evening degree programme the Unit provides continuing education, e.g. health and social care administration, for nurses, health visitors, midwives, physiotherapists and other health and social care professionals. Courses for professional updating and tailored programmes are available through the Unit. Open study courses are offered also to the general public.

The special support services and facilities consist of high-quality library, IT services, student advisor's office, tutor students' assistance, restaurant and leisure time activities. All staff is committed to providing a caring and supporting environment for every student. The Students' Union of the Unit of Health Care and Nursing has an important role in the promotion of the education and welfare of the students. The Students' Union representatives are always ready to help local as well as international students. Some flats with reasonable rent are available to international students.

The unit works closely with many external bodies and institutions, through which students have the opportunity to undertake study and practice placements in many European countries, Russia and China. In the near future cooperation will also begin with the United States.

The unit runs its own "Health Station", which offers those living in the Kemi-Tornio region many kinds of health care and rehabilitation services. Nursing and physiotherapy students can do a part of their clinical practice in this "Health Station".

Contact information:

Postal address:

Kemi-Tornio Polytechnic
Unit of Health Care and Nursing
Meripuistokatu 26, PL 506
FIN-94100 Kemi
E-mail: kthol@tokem.fi

Unit Director

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The Unit Coordinator for ECTS

Ms. Eila Huhtala
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Student Advisor

Ms. Sinikka Kähkölä
Tel. + 358 16 258 436, mobile phone + 358 400 695 907
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The Unit of Social Education and Social Care

The Unit of Social Education and Social Care offers 250 young people and adults such training as leads to a polytechnical degree as well as special studies such as drama and working instructor training. The chief person responsible for the social field is Unit Director Arja Honkakoski; the senior teacher and the adult education coordinator, together with a staff of fifteen permanent teachers and numerous experts from outside the school, are responsible for the training provided. Our working community maintains a warm, cosy and intimate, yet efficient, atmosphere.

The students have at their disposal their own library of the social field with its data acquisition systems, as well as the various learning centres of the Polytechnic in the Kemi and Tornio area. In their own library and in the learning centres, the students have access to the lending services, data services and computers for independent work and data acquisition.

The students in the social field participate actively in the development of their studying conditions. Tutor students do their part in acquainting new students with the studying routines and convey to them their own studying experience. The student association of the Unit of Social Education and Social Care has its important role in improving the studying conditions and general comfort and enjoyment.

Contact information:

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The Unit of Social Education and Social Care
P.O.Box 504, FIN-94100 Kemi
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Unit Director

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The Unit Coordinator for ECTS

Leena Leväsvirta
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Tutor

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E-mail: eliisa.kursula@tokem.fi

The Unit of Cultural and Media Studies

The Unit of Cultural and Media Studies has about 300 students and some 40 teachers, a Unit Director and two secretaries. It also has its own local educational TV station, "Mean Vayla" (transl. "Our Channel"), and local radio station, "Radio Aktiivinen" ("Radio Active"). The programmes include interviews, music and entertainment, panel games and news on a regular basis.

The equipment reserved for different aspects of production and artistic expression in the unit are plentiful and modern, and include steadicams, photography studio and laboratories, lighting systems, theatre technology, TV studio, sound reproduction facilities and video equipment for both indoor and outdoor work, as well as different kinds of editing options. The unit also has a library and connections to other polytechnic and university library units.

The unit is also strongly active internationally (in the Northern, European and Eastern dimensions), supporting the students in their need for international work and cultural experience. Institutes cooperating with the unit are ISC, St. Louis Business University (Belgium), University of Athens and CAID (Greece), University of Metz and 8th University of Paris (France), New University of Lisboa (Portugal), Moscow Film Institute VGIK (Russia), University of Luleå (Sweden), Hochschule Bremen (Germany), FH-Techno-Zentrum Salzburg (Austria) and Kodolanyi Janos Föiskola (Hungary).

The school has two restaurants and a cafeteria. Students' flats are situated in dormitories near the school. Private flats are situated around the cities of Tornio (Finland) and Haparanda (Sweden).

Postal address

Kemi-Tornio Polytechnic
The Unit of Cultural and Media Studies
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Unit Director

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Senior Lecturer

Mr John Collins
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6. ACADEMIC INFORMATION

The academic calendar for 1999/2000

The academic year at the polytechnic consists of an autumn semester and a spring semester. The autumn semester runs from August to mid-December, while the spring semester runs from January to May. The exact starting point depends on the education unit and programme. Each period consists of about a 7- to 8-week lecturing period which contains, besides lecturing, also other kinds of working methods. Examinations are usually given at the end of each period or semester for all the courses given during that time.

ACADEMIC CALENDAR 1999-2000	
Autumn semester 1999 (Periods 1 and 2)	Starting Date
Euro-Economics Education	23rd August
Cross-Border Engineering	1st September
Information Systems Specialist Education	August 1999
International Nursing Programme	mid-August
Degree Programme in Cultural and Media Studies	mid-August
Degree Programme in Social Education and Social Care	mid-August
Euro-Arctic Tourism	6th September
Spring semester 2000 (Periods 4 and 5)	mid-January to end of
Gateway	February 2000
A short break in autumn	
Christmas vacation is from 20th December to mid-January	
Winter holiday in March and Easter holiday (both about one week long)	

Application and registration procedures

The application procedures vary depending on whether the student is applying within an exchange programme such as Erasmus or an exchange agreement between his/her home institution and Kemi-Tornio Polytechnic. **ECTS/ERASMUS students fill in a special application form which includes a learning agreement.** The learning agreement is drawn up by ECTS/ERASMUS students and the institutions involved before the student goes abroad. The application form for Socrates/Erasmus Student Exchange Programme is attached at the end of the guide.

The education programmes have different application deadlines which should be taken into consideration. **ECTS/ERASMUS students, who will spend a limited time in the education institution abroad, must submit their applications for the autumn semester by 15th May and for the spring semester by 15th November. If a student intends to study the whole degree programme in Kemi-Tornio Polytechnic, s/he must follow the special application deadlines of individual education programmes. In this case a student must also use the special application forms of education programmes which can be obtained from the education units.** Some education fields arrange aptitude tests of their own. More detailed information on aptitude tests can be requested from the education units.

Erasmus students like all exchange students must sign up for their education programmes in the education unit as soon as possible after their arrival.

7. DEGREE PROGRAMMES

CROSS-BORDER ENGINEERING

Bachelor of Engineering

In the Cross-Border Engineering Education Programme the tuition is given completely in English. The students will specialise in digital electronics hardware design, digital signal processing, and embedded microprocessor design. The modular curriculum consists of e.g. digital electronics design, signal theory, mathematics, business & management, laboratory exercises, computing, science and physics, research and project work.

The duration of the studies is 4 years and the extent of credits 240 ECTS credits/160 credits. Several different kinds of teaching and learning methods are used, such as lectures, written exams, laboratory work, projects, reports, and seminars. The degree programme comprises the following main elements: Basic Studies 60 ECTS credits, Professional Studies 60 ECTS credits, Line-specific Professional Studies 45 ECTS credits, Elective Studies 30 ECTS credits and Bachelor's Thesis 15 ECTS credits. The CBE education also includes 12 months of training (measured to 30 ECTS credits) and the trainee post can be applied for either in Finland or abroad. The education is free of tuition fee.

The entrance qualifications are a leaving certificate from high school, technical vocational school or a college-level institution and a qualified entrance examination. The entrance examination consists of an aptitude test (including mathematics) and an English language test. Graduates of the Cross-Border Engineering Degree Programme are qualified to work on international assignments in the field of Electronics Engineering and Information Technology.

If you intend to study the whole degree programme in Kemi-Tornio Polytechnic you have to follow the application deadline of the degree programme which is as follows: outside Scandinavia May 15th 1999, and within Scandinavia June 30, 1999. The application forms can be obtained from the education unit or applications@tokem.fi

Note: all the information given here is preliminary and should be checked by the education unit.

Degree Programme in Information Technology - Cross-Border Engineering Education academic year 1999-2000										
Code	Course	1st year		2nd year		3rd year		4th year		Total ECTS
		ECTS		ECTS		ECTS		ECTS		
		autumn	spring	autumn	spring	autumn	spring	autumn	spring	
BASIC AND PROFESSIONAL STUDIES										
35001004	Analogue Electronics			3						
35002012	Digital Electronics Labs			3						
35001005	Analogue Simulation			3						
35001012	Digital Simulation Project			3						
35001006	Microelectronics					3				
35010105	Engineering Documentation			3						
35010110	Communication Skills	3								
35010111	English 1	3								
35001402	Object Oriented Progr.			3						
35001403	Computer Technology			3						
35001404	Operating Systems					3				
35008501	Computer Networks						3			
35001407	Computing Project				3					
35008001	Signal Theory					3				
35008502	Telecomm. Basics						3			
35010416	Spectral Analysis				3					
35001450	Microprocessors				3					
35001451	Controller Applications					3				
35001452	Controller Programming					3				
35001453	Controller Project					3				
35001014	Digital Design						3			
35001015	Digital Design Project						3			
35001016	Digital Electronics Labs.						3			
35010417	Discrete Time Signals					3				
35010418	Stat. & Coding Theory						3			
35010703	Internat. Marketing optional			3						
35010704	Work in Multicult. env. optional				3					
35010720	General Economics		3							
35010721	Economics and Project		3							
35002016	Electric Circuits labs		3							
35001011	Sequential Circuits	3								
35001013	Combinatorial Circuits	3								
35001411	Simulation of Electronics		3							
35008002	DC Circuits	3								
35008003	AC Circuits		3							
35002015	Electric Safety				3					
35006400	Electrical Installations				3					
35006412	Power Electronics					3				
35010413	L-transforms				3					
35010414	Diff. Equations			3						
35010415	Z-transforms				3					
35010305	German 2 optional			3						
35010306	German 3 optional				3					
35010304	German 1		3							
35001405	Intoduction to Progr.		3							
35001406	C++-Programming		3							
35001410	Use of PC Applications	3								
35008005	Circuit Analysis			3						
35010410	Basic Mathematics	3								
35010411	Linear Algebra	3								
35010412	Math Computer Tools		3							
35007001	Measurement Labs				3					
35010820	Environmental Tech.	3								
35007000	Measurement Techniq.				3					
35010511	Physics 1		3							
35010512	Physics 2		3							
35008301	Automation Basics						3			
35008302	Automation Labs						3			
35010801	Philosophy					3				
35010201	Grundkurs i svenska				3					
	Course will be announced later						3	27		
ELECTIVE STUDIES										
PRACTICAL TRAINING										
BACHELOR'S THESIS										
				3	3	3	3	3	30	
									15	
	Total including electives	27,0	33,0	36,0	33,0	30,0	30,0	30,0	45,0	264,0
	Total for the degree	27,0	33,0	27,0	27,0	27,0	27,0	27,0	45,0	240,0

Course Title**Extent of credits****R&D****3 ECTS credits (2 Finnish credits)**

Aims The course is aimed at helping the students understand the basic principles of research and development in engineering.

Content Scientific knowledge and product development, the development process as an investment, systematic product development process.

Teaching 42 hours including lectures and a seminar.

Assessment One written exam.

Literature Will be announced later.

Philosophy**3 ECTS credits (2 credits)**

Aims The course is primarily intended to help students acquire the thinking skills and societal awareness necessary to become excellent engineers and vital contributing members of society.

Content The course is focused on the traditional substantive problems in philosophy. Lectures will be given on ancient, medieval, and modern philosophy, logic and theory of argumentation. Special emphasis is placed on the question of ethics and its application.

The ethics component deals with moral concepts and theories; basic concepts and methods in ethics; ethics and professionalism in engineering; codes of ethics, organisational loyalty and professional rights; environmental and professional responsibilities in engineering, public safety, social control of sciences and technology. These issues will be developed through discussions of a variety of topics, case studies, inquiries, and problem-solving exercises.

Teaching 42 hours of lectures.

Assessment Will be based on the student's performance at exams, assignments, and class participation.

Literature Library and web research, textbook: Ethics in Engineering 3rd edition by Mike.W.Martin and Roland Schinzinger, ISBN 0-07-040849-1.

Controller applications**3 ECTS credits (2 credits)**

Aims The objective of the course is to help students deepen their programming skills, especially in hardware-related and real-time applications. At the end of the course the student will be capable of designing and incorporating hard- and software for controller applications.

Content Developing software using IAR-tools, real-time operating systems, input and output programming, real time applications, and controlling machines with the help of a microcontroller. This course also includes exercises and assignments.

Teaching 42 hours of lectures and tutorials.

Assessment One written exam and assignments.

Controller Programming

3 ECTS credits (2 credits)

Aims The course will provide students with the knowledge required in the use of real-time software in hardware control. Applications are programmed using ANSI-C high-level language.

Content IAR-environment, basic structure of controller software, implementing the state machine using software. This course also includes exercises in programming the applications.

Teaching 42 hours of lectures and tutorials.

Assessments One written exam and assignments.

Mathematics 3

9 ECTS credits (6 credits)

Course 5: Fourier analysis and probability.

Content: Fourier series, Fourier transform, spectra, elements of probability.

Course 6: Applied mathematics and Statistics.

Content Statistics, probability distributions, elements of information and coding theory.

Aims The course is designed to teach the student how to apply mathematics in the theory of data communication systems, and use the Fourier analysis for example, in signal processing.

Assessment One written exam.

Literature Text book: Engineering Mathematics. A Modern Foundation for Electronic, Electrical and Systems Engineers by A. Croft - R. Davison - M. Hargreaves, Addison-Wesley 1996 ISBN 0-201-87744-9.

Power Electronics

3 ECTS credits (2 credits)

Aims The course is intended to provide the student with the necessary skills in theoretical analysis of the fundamental switching power converters, and the application of MathCad and Pspice in basic power electronics circuits.

Content The switching matrix, voltage source, voltage law, current source, current law, existence (control) function, wanted and unwanted components, buck converter, boost converter, buck-boost converter, operation in different quadrants and basic

power electronics components and their simulation.

Teaching 42 hours of lectures and tutorials.

Assessment One written exam.

Literature Text book: Switching power converters by Robert E. Wood, Krieger Publishing Company, Inc., ISBN 0-89874-779-1.

C++ Programming **3 ECTS credits (2 credits)**

Content Students will examine the structure and function of Windows programs created using C++ and object-oriented library. The course also involves modifying the programmes to meet given specifications.

Prerequisites: Introduction to programming.

Teaching 42 hours of lectures, tutorials and supervised work in a computer laboratory.

Assessment One exam including literal and computer tasks.

Literature Online manual of the compiler, materials from the Internet.

Programming project **3 ECTS credits (2 credits)**

Content Students will create a real Windows program using C++
Prerequisites: C++ programming.

Teaching Supervision of the students' project work.

Assessment Will be based on students' project reports.

Literature Online manual of the compiler, materials from the Internet, C++ annotations.

Digital Design **3 ECTS credits (2 credits)**

Aims The course is aimed at deepening the student's knowledge and understanding in the fields of digital electronics and design.

Content Altera design-tool, design process, including schematic diagrams, text and wave forms as entries, verification of the design, and use of FPLD-components. The course is closely linked with the digital design project.

Teaching 42 hours of lectures and tutorials.

Assessment One written exam and assessment reports.

Literature Altera manuals, VHDL Made Easy by David Pellerin and Douglas Taylor, Prentice-Hall Inc. 1997, Digital Systems Design and Prototyping Using Field Programmable Logic by Zoran Salcic and Asim Smailangic, Kluwer Academic Publisher, 1997.

Further details on literature will be provided later.

Digital Design Project

3 ECTS credits (2 credits)

- Aims** The overall goal of the course is to instruct the student in industrial design, and provide him/her with knowledge on the use of EDA-tools in digital product design. The student will work with a complete design project, from specification to testing. The course is based on the applications of FPLD components and the use of hardware description language (VHDL) in designs.
- Teaching** Supervision of students' project work.
- Assessment** Will be based on students' project reports.

Labs in Digital Electronics

3 ECTS credits (2 credits)

- Aims** To deepen the student's knowledge and understanding in the use of measurement equipment and test designs. Experiments vary from year to year.
- Teaching** 42 hours of supervised lab experiments.
- Assessment** Will be based on written reports, and the student's overall output, including attendance, and individual progress in laboratory work.

Automation Labs

3 ECTS credits (2 credits)

- Aims** The student will get first-hand training in the use of computer-based control systems. Laboratory work includes introductory exercises in process control, robot control, and modern optical measurement systems.
- Teaching** 42 hours of supervised lab experiments.
- Assessment** Will be based on written reports, and the student's overall output, including attendance, and individual progress in laboratory work.

Basics in Telecommunication

3 ECTS credits (2 credits)

- Aims** The student will be taught the basics of telecommunication systems including telephone, video, television, and radio. Special emphasis is placed on the relationship between signal theory and telecommunication systems.
- Content** Principles of radio and television receivers, pulse carrier and pulse code modulations, noise and error in signal transmission, basics of information theory, simulations and analysis of modulation and transmission systems using PSpice and MathCad or Matlab programmes.
- Teaching** 42 hours of lectures and tutorials.
- Assessment** One written exam and assignments.

- Literature** Audio, Video and Data Telecommunications by David Petersen, McGraw-Hill.
- Computer Networks** **3 ECTS credits (2 credits)**
- Content** The basics of local area networks, internetwork components and the ISO layers of communications. Analysing LAN-traffic.
- Teaching** 42 hours of lectures, tutorials, and computer laboratory experiments.
- Assessment** One written exam and assignments.
- Literature** Unix Network programming by Stevens, chapter 4.
- Operating Systems** **3 ECTS credits (2 credits)**
- Content** Principles of multitasking operating system, process management, memory management, and file management. Training with Linux shells.
- Teaching** 42 hours of lectures, tutorials, and computer laboratory experiments.
- Assessment** One written exam and assignments.
- Literature** Unix for Programmers and Users by Graham Glass, chapters 1-4, 8 and 11.
- Control Theory** **3 ECTS credits (2 credits)**
- Aims** The course will introduce the student to an understanding of the basics of classical control theory.
- Content** Examples of control systems, mathematical tools of control theory, modelling of dynamic systems, transient response analysis, control actions and response of control systems, root-locus analysis, frequency response analysis, turning of PID controllers.
- Teaching** 42 hours of lectures and tutorials.
- Assessment** One written exam and possible assessment reports.
- Literature** Modern Control Engineering, 3rd Ed. by Katsuhigo Ogata, Prentice-Hall, 1997 ISBN: 0-13-261389-1.
- Signal Theory** **3 ECTS credits (2 credits)**
- Aims** The course is intended to provide the student with adequate knowledge in understanding the basic concepts of analogue signal processing, the importance of signal theory in information technology. The course is also aimed at providing the students with the fundamentals for pursuing post-graduate studies.
- Content** Elements of signals and systems, responses and transfer functions of an LTI-system, modulation, noise, types of filters, the use of PCs in signal theory.

Teaching 42 hours of lectures and tutorials.

Assessment One written exam.

Literature Text book (will be announced later), library and Web research.

Engineering Report Writing **3 ECTS credits (2 credits)**

Aims The course instructs the students in report writing in engineering.

Content The importance of documentation in engineering, different types of reports, ethical rules in writing scientific and engineering reports, layout of reports, use of computers in documentation i.e. combining the results of the different types of documentation programs. Including formulas, equations, tables, and graphs, creating the index and table of contents for a structured engineering document, documenting the sources of reports. The course is closely linked with laboratory experiments in physics. Assignments in this course include supervised report writing.

Teaching 21 hours of lectures and tutorials.

Assessment Evaluation of reports.

CAD-drafting & SA **3 ECTS credits (2 credits)**

Aims The course provides the student with knowledge on how to utilise the CAD and hypertext in engineering documentation. Topics include basics of structured analysis (SA) in computer software.

Content The user interface of a CAD-program, CAD-design vs. CAD-drafting, designing electronic circuit schematics using the CAD, hypertext in engineering documentation, creating web pages, basics of SA and applications of SA in software documentation.

Teaching 42 hours of lectures and tutorials.

Assessment Will be based on Web-pages made by students, and other assignments.

Literature Will be announced later.

Sequential Circuits **3 ECTS credits (2 credits)**

Aims This course is primarily designed to teach the student how to analyse, simulate, design, and synthesise sequential circuits using state machine models, and sequential components like flip-flops, counters etc.

Content Sequential circuit analysis, timing diagrams, state machine models, flip-flops, counters, shift registers, simulation of digital circuits using PSpice, other sequential components: memories, PALs, FPGAs.

Teaching 42 hours of lectures and tutorials.

Assessment One written exam.

Literature Digital Fundamentals, 6th ed. by Floyd, Merrill 1996, ISBN 0-02-338502-2, chapters 8 - 14.

Microprocessors

3 ECTS credits (2 credits)

Aims This course is designed to teach the students the basics of microprocessors, as well as provide them with the knowledge on how to programme the hardware.

Content Basic architectures of processors, microcomputer as a hierarchical structure of levels, CPU, RAM, input and output, controllers, with emphasis on the Intel 8051 family, development tools for controller programming.

Teaching 42 hours of lectures and tutorials.

Assessment One written exam.

Literature The 8051 Microcontroller by I. Scott MacKenzie, Prentice-Hall, ISBN 0-02-373660-7, info about the further literature will be provided later.

Digital Simulation Project

3 ECTS credits (2 credits)

Aims The course seeks to provide the student with knowledge of how the practical design project of a digital electronics module is carried out from specification to verification with the help of simulation.

Content Students work in groups of two. Individual descriptions are given to the groups, from which specifications are to be designed. After approving the specification, the supervisor will ask the respective groups to design the electronic unit and verify the design using simulation.

Teaching Supervision of students' project work.

Assessment Will be based on students' reports.

Literature Digital Fundamentals, 6th ed. by Floyd, Merrill 1996, ISBN 0-02-338502-2, Component data books.

Mathematics 2

9 ECTS credits (6 credits)

Differential Equations.
L- and Z-transforms.
Spectral Analysis.

Aims This course is designed to teach the student how to apply mathematical skills in solving advanced problems in electrical and control engineering. This course also provides the student with the basics for graduate studies.

Content Continuation of calculus, ordinary differential equations, Laplace-transform, z-transform, difference equations, basic concepts of Fourier series.

Teaching 128 hours of lectures and tutorials.

Assessment Written exams.

Literature Text book: Engineering Mathematics. A Modern Foundation for Electronic, Electrical, and Systems Engineers by A. Croft, R. Davison, and M. Hargreaves, Addison-Wesley 1996 ISBN 0-201-87744-9.

Physics 2

3 ECTS credits (2 credits)

Aims The course provides the students with advanced knowledge of physics in the area of waves, electric and magnetic fields, induction, geometrical and physical optics. The topics in modern physics will cover areas like relativity, quantum theory, atomic physics, nuclear physics, nuclear energy, and particle physics.

Teaching 42 hours of lectures and tutorials.

Assessment One written exam.

Literature Fundamentals of Physics by Halliday, Resnic and Walker, John Wiley & Sons Inc.

Measurement Technology

3 ECTS credits (2 credits)

Aims The course is geared towards providing the student with the basic understanding of how the measurement systems work, starting from classical instrumentation to modern computer based data acquisition systems. This includes applications where students get to measure specific physical quantities.

The instruction includes applied measurements as well as theory of measurement technology. Part of the theory is explained by the teacher in the form of demonstrations and part of it is carried out by students in the form measurements experiments.

Teaching 42 hours of lectures, tutorials, and laboratory experiments.

Assessment One written exam, and assessments based partly on laboratory assignments.

Literature Principles of Measurement and Instrumentation by Alan S. Morris, Prentice-Hall.

German 2

3 ECTS credits (2 credits)

Aims The course aimed at giving the student a deeper insight into the German language and culture. At the end of the course the student should be able to continue their studies in German.

Content The student will put his/her knowledge and skills into practice by working with technology and economic-related texts in German. The instruction also includes discussions, written exercises and grammar.

Teaching 42 hours of lectures and tutorials.

Assessment Will be based on class participation, assignments, and exams.

Literature Will be announced later.

Working in Multicultural

Environments (selective course)

3 ECTS credits (2 credits)

Aims The course is designed to provide the student with knowledge of how to succeed in his or her career when working in cross-cultural environments.

Content Knowing oneself, types of personalities, self-management, career planning, making the best of one's working life, business cultures in Europe, cross-cultural management.

Teaching 42 hours of lectures and tutorials.

Assessment Will be based on a written exam and assignments.

Literature Will be announced later.

Circuit Analysis

3 ECTS credits (2 credits)

Aims The course will teach the student how to analyse electric circuits under different circumstances, steady state and transient, and use the computer in calculating the fundamental properties of suggested networks including time and frequency response.

Content DC: Capacitors, permittivity, dielectric strength, RC-transients, charging, discharging, time constant, instantaneous values, equivalent circuits, current, capacitors in series and parallel, energy stored by a capacitor, inductors, permeability, induced voltage, RL transients, storage phase, decay phase, time constant, instantaneous values, equivalent circuits, inductors in series and parallel, energy stored by an inductor.
AC: Frequency response of basic elements, frequency response of series AC-circuits, absolute value and phase angle, frequency response of parallel AC-circuits, absolute value and phase angle, series resonance, resonant frequency, quality factor, selectivity, bandwidth, cutoff frequencies, parallel resonance, unity power factor, maximum impedance, selectivity, quality factor, filters, low-pass, high-pass, band pass, band-stop, and graph plotting.

Teaching 42 hours of lectures and tutorials.

Assessment One written exam.

Literature Textbook: Introductory Circuit Analysis by Robert L. Boylestad, Macmillan Publishing Company New York, ISBN 0-02-313161-6.

Analogue Simulation Project **3 ECTS credits (2 credits)**

Aims The students will learn how to design a transistor amplifier as well as verify the design using PSpice-simulation.

Content Students work in groups of two. An individual design task is given to each group, which involves designing the transistor amplifier to meet given specifications. After the design students will check the parameters using the simulation.

Teaching Supervision of students' project work.

Assessment Will be based on written reports.

Electronics Lab **3 ECTS credits (2 credits)**

Aims The contents of analogue and digital electronics courses are tied to the real world in the laboratory. Laboratory work will teach the students how to co-ordinate their theoretical knowledge in using electronic components and measuring equipment. Part of the course will include Web and library research for report writing.

Content Basic applications of transistors and operational amplifiers, designing and processing a printed circuit board, detecting faults in prototypes, construction of small digital electronics devices using TTL-components.

Teaching 42 hours of supervised laboratory experiments.

Assessment Will be based on written reports as well as the student's overall output including attendance and individual progress in laboratory work.

Physics Lab **3 ECTS credits (2 credits)**

Aims The course provides the student with advanced knowledge of physics through practical measurement experiments. This includes error estimation and general causes of measuring errors. The student will write reports on selected laboratory experiments.

Teaching 42 hours of supervised laboratory experiments.

Assessment Will be based on written reports and the student's overall output including attendance and individual progress in laboratory work.

Electric Safety & First aid **1.5 ECTS credits (1 credits)**

This First Aid Course which includes CPR is intended to provide the student with the necessary skills in helping the wounded or injured in the event of an accident.

The students are awarded certificates at the end of the first aid course.

Modular Programming

3 ECTS credits (2 credits)

- Aims** The course is geared at providing the student with advanced knowledge of programming in high-level language.
- Content** C-programming, creating multiple compilation unit projects, learning the use of structured data types.
- Teaching** 42 hours of lectures, tutorials, and supervised work in computer lab.
- Literature** The Art and Science of C, by Roberts, part two and three.

Computer Technology

3 ECTS credits (2 credits)

- Aims** The principal objective of the course is to provide the student with knowledge about the basic operational and structural features of the computer.
- Content** Short history of computers, an overview of the computer hardware: processor, RAM, mass memory, monitors, principles of computer communication, peripheral devices.
- Teaching** 42 hours of lectures and tutorials.
- Assessment** One written exam.
- Literature** Will be announced later.

Basics in Swedish

3 ECTS credits (2 credits)

- Aims** The course will focus on preparing students for the Finnish civil service exams in Swedish. The language of instruction is Finnish.
- Content** Grammar exercises, technology and business-related texts, discussions, presentations.
- Teaching** 42 hours of lectures and tutorials.
- Assessment** Will be based on class participation, oral presentations, assignments, and exams.
- Literature** Will be announced later.

Electrical Installations

3 ECTS credits (2 credits)

Content will be announced later.

Communication skills

3 ECTS credits (2 credits)

- Aims** The course will introduce students to the basic practical communication exercises in oral and written English.

Content The course is a combination of lectures, discussions, and written exercises. The main areas of instruction will include formal and informal meetings, presentations, negotiating and socialising skills, report writing, summaries, job applications, business letters, texts on technology, and corporate communication skills.

Teaching 42 hours of lectures and tutorials.

Assessment Will be based on class participation, assignments, and exams.

Literature Will be announced later.

German **3 ECTS credits (2 credits)**

Aims This course is designed to introduce the students to the structure and vocabulary of the German language and have them work with technology-related texts in German.

Content Basic grammar and structure of the language, texts on technology and corporate communication, discussions, exercises, and assignments.

Teaching 42 hours of lectures and tutorials.

Assessment Will be based on class participation, assignments, and exams.

Literature Deutsch ist da! 1 by Pauli Kudel and Marketta Tikkanen, OTAVA.

Analogue Electronics **3 ECTS credits (2 credits)**

Content will be announced later.

Combinatorial Circuits **3 ECTS credits (2 credits)**

Aims Students will study the basics of combinatorial logic, Boolean algebra, digital electronics and prepare themselves for subsequent courses in digital electronics and computer sciences.

Content Digital signals, analogue signals, binary, octal, and hexadecimal number systems, use of binary numbers in arithmetical calculations, Boolean algebra, creating and minimising combinatorial logic expressions, implementing combinatorial logic using gates, basic combinatorial logic applications: encoders, decoders, adders, and introduction to PAL-circuits.

Teaching 42 hours of lectures and tutorials.

Assessment One written exam.

Literature Textbook: Digital Fundamentals, 6th ed. by Floyd, Prentice-Hall 1997, ISBN 0-13-573479-9, chapters 1-7.

Mathematics 1**9 ECTS credits (6credits)**

Aims This module is aimed at enabling the student to solve mathematical problems encountered in other disciplines, as well as incorporate the use of computers and mathematical theories in resolving problems.

Students will be divided into two groups based on their previous knowledge in mathematics.

The more advanced group will have a smaller number of lectures whereas the less advanced group will have more lectures and tutorials where many exercises are done. After the first test the groups are rearranged.

Basic Mathematics and Linear Algebra

Content Vector algebra, matrix algebra, linear systems of equations, complex numbers.

Math Computer Tools

Content Elementary real functions, differential and integral calculus of one variable real function, use of computers in understanding mathematical theories and solving problems.

Teaching 128 or 162 hours of lectures, tutorials, and supervised work in a computer laboratory.

Assessment Written exams.

Literature Textbook: Engineering Mathematics. A Modern Foundation for Electronic, Electrical and Systems Engineers by A. Croft, R. Davison, and M. Hargreaves, Addison-Wesley 1996 ISBN 0-201-87744-9.

Physics 1**3 ECTS credits (2 credits)**

Aims The primary objective is to instruct the students in the basics of physics and provide them with the fundamentals needed for engineering studies.

Content Linear and non-linear motion in dimensions 1, 2, and 3, Newton's laws, energy and power, oscillations, pressure and kinetic gas theory, thermodynamics, the Carnot cycle and entropy, basic theory of relativity.

Students will be divided into two groups based on their previous knowledge in physics.

The more advanced group will have a smaller number of lectures, whereas the less-advanced group will have more lectures and tutorials where many exercises are done. After the first test the groups are rearranged.

Teaching 36 or 56 hours of lectures, tutorials, and lab experiments.

Assessment Written exams.

Literature Fundamentals of Physics by Halliday, Resnic, and Walker, John Wiley & Sons Inc.

General Economics **3 ECTS credits (2 credits)**

Aims Students will study the basics of economics, the significance of economics-related information in engineering as well as the importance of entrepreneurship in an economy.

Content Markets and consumer behaviour, labour market, organisation of production, financial market, international trade, environmental issues, financial calculations, entrepreneurship and entrepreneur, starting a business and running the firm.

Teaching 42 hours of lectures and tutorials.

Assessment One written exam.

Literature The Text book: Economics in a business context by Alan Neal and Colin Haslan, Chapman & Hall, ISBN 0-412-37570-2 .

Electric Circuits Lab **3 ECTS credits (2 credits)**

Aims At the end of the course students will be able to interpret colour codes, create electric networks, perform basic electrical measurements, work in an electrical environment and in a team.

Content DC: Resistors and the colour code, DMM, VOM, Ohm' s law, series resistance, parallel resistance, parallel DC circuits, rheostats and potentiometers, series-parallel DC circuits, superposition theorem (DC), Thevenin' s Theorem and maximum power transfer.

AC: Oscilloscopes, RLC components, frequency response of R, L and C components, frequency response of series RL and RC network, using oscilloscope in phase measurements, series sinusoidal circuits, parallel sinusoidal circuits, series-parallel sinusoidal circuits, Thevenin' s theorem and maximum power transfer.

Electronics: Semiconductor diode, zener-diode, transistor, semiconductor switch, semiconductor rectifier, semiconductor rectifier with capacitive filter, series regulator, basics of digital electronics using TTL-components.

Teaching 42 hours of supervised laboratory experiments.

Assessment Will be based the student' s overall output including attendance and individual progress in laboratory work.

Use of PC **3 ECTS credits (2 credits)**

Aims The main objective of the course is to familiarise the student with how the use of computers can be incorporated into engineering studies. The course includes word processing exercises, spreading sheets, calculations, and electronic mailing.

Content Students determine the level at which they wish to begin, after which they will study the basic operation of the systems. They will be given an in-depth review of the MicroSoft Windows, Word, and Excel programmes. Depending on the progress of the students, the course may also cover other applications such as the internet, virus protection etc. The latter part of the course focuses on the MathCad: Menus and palettes, variables, fonts, range variables, graphs, pictures, text regions, units, solving equations, symbolic calculations, and use of Help.

Teaching 42 hours of supervised work in computer laboratory .

Assessment Will be based upon students' reports and a written exam.

Literature Program manuals.

C-Programming

Aims The course is designed to instruct the student in computer programming using a structured language. The course provides the student with the basics upon which he or she may pursue further studies in computer programming in C-language.

Content Basics of ANSI-C-language: programme structure, variables, expressions, program control, functions. The programming is carried out using PC's and the Borland programming tools: editor, compiler, linker, and debugger. This incorporates the use of flow charts in describing algorithmic solutions, converting the flow charts to programmes, and the use of a symbolic debugger. A selection of exercises.

Teaching 42 hours of lectures, tutorials, and supervised work in computer laboratory.

Literature Textbook: The Art and Science of C - An Introduction to Computer Science by Eric S. Roberts, Addison Wesley Publishing Company, ISBN 0-201-54322-2.

Environmental Technology **3 ECTS credits (2 credits)**

Aims The student will be taught the fundamentals of major global environmental issues.

Content The student will be introduced to problems causing global atmospheric change, acidic depositions and their effects on the environment, natural disasters, energy issues, and emissions to water and air. In addition to this the student will study ways of reducing these emissions with the help of technology.

Teaching 42 hours of lectures, tutorials, and supervised work in laboratory.

Assessment One written exam.

Literature An introduction to global environmental issues by Kevin T. Pickering and Lewis A.Owen.

Economics & Project **3 ECTS credits (2 credits)**

Content will be announced later.



DEGREE PROGRAMME IN EURO-ECONOMICS NORDIC STUDIES IN EURO-ECONOMICS

Kemi-Tornio Polytechnic offers a degree programme in EURO-ECONOMICS. Its main aim is to provide students with skills required in international business.

Nordic Studies in Euro-Economics leads to a Bachelor's degree in Business Administration. The degree will take three and a half years to complete and consists of 210 ECTS credits, 140 Finnish credits. The academic year is divided into autumn and spring semesters, each consisting of study and exam periods. The language of instruction is English and the teaching will integrate lectures, seminars and workshops. Students are also offered an extensive programme of elective studies, as well as a five-month training period.

The studies are designed to focus on developing creativity and improving presentation skills - the skills which we regard as the most important requirements in working life today. Kemi-Tornio Polytechnic recognizes the importance of networking with industry and business as well as the other polytechnic units, and attempts to incorporate these aspects into the education programme as much as possible. Furthermore, the college provides an environment in which students can familiarise themselves with today's information technology.

An additional strength lies in the geographical proximity of the Russian and Swedish borders, and cooperation with our foreign partner institutions in those countries will play an important role in the implementation of the programme accordingly.

On completion of the programme, students

- have acquired practical and theoretical skills to work in a business environment at home or abroad
- are able to work independently as well as part of a team
- have developed their communication and crosscultural skills
- have developed competence in information technology and in more than one foreign language

The studies progress as follows: the first stage, consisting of basic studies, will provide students with a fundamental knowledge of the following subjects: Business Administration, Marketing, Presentation Skills, Accounting, Information Technology, Economics, Quantitative Methods, Logistics and Law. The use of networks will facilitate international and social contacts.

The second stage will give students an opportunity to deepen their knowledge of the subjects listed above. In addition, the students will obtain practical skills for a training period to be performed in an international business environment.

During the third stage the students will be offered an extensive combination of theoretical lectures and professional studies in order to develop personal abilities required in performing bachelor's thesis.

If you intend to study the whole degree programme in Kemi-Tornio Polytechnic you have to follow the application deadline of the degree programme which is as follows: 18th June 1999. The application forms can be obtained from the education unit.

Note: all information given here is preliminary and should be checked by the education unit.

Degree Programme in Euro-Economics Education										
Code	Course	1st year		2nd year		3rd year		4th year		Total ECTS
		ECTS	ECTS	ECTS	ECTS	ECTS	ECTS	ECTS	ECTS	
		autumn	spring	autumn	spring	autumn	spring	autumn	spring	
BASIC STUDIES										60,0
281010	Business Administration	3,0								
281012	Marketing	4,5								
281014	Logistics		4,5							
281016	Financial Accounting	4,5								
281018	Management Accounting		4,5							
281020	Information Technology	4,5								
281022	Quantitative Methods		4,5							
281024	Law		4,5							
281026	Economics	4,5								
281028	Communication in Business	4,5								
281030	Presentation Skills	3,0								
281032	Team and Project Work		3,0							
281113	Professional Reading, Writing and Speaking			2,0	2,5					
281128	Negotiations							3,0		
	Language Studies		3,0							
PROFESSIONAL STUDIES										75,0
Business Administration										
281100	Human Resource Management				3,0					
281101	Internationalization of companies			3,0						
281120	Strategic planning							3,0		
Marketing										
281103	International Marketing				6,0					
281121	Foreign Trade						3,0			
Logistics										
281104	Logistical Management and Strategies			3,0						
Accounting										
281105	Taxation			3,0						
281122	International Accounting						3,0			
281123	Financial Analysis						3,0			
281106	Activity Based Costing				3,0					
Financial Management										
281107	Financial Planning			3,0						
281124	Financial Management and International Finance						4,5			
Information Technology										
281108	Advanced Use of Spreadsheets			3,0						
281109	Applications in Business Administration				3,0					
Research Methods										
281110	Statistics			3,0						
281125	Qualitative Methods						3,0			
Law										
281111	International and EC Law			3,0						
281112	Private International Law				3,0					
281126	Law of Obligations						3,0			
Economics										
281127	International Economics						4,5			
Language Studies										
	German/French/Spanish/Swedish/Finnish/Russian			3,0	3,0				3,0	
ELECTIVE STUDIES										30,0
PRACTICAL TRAINING										30,0
BACHELOR'S THESIS										15,0
Total ECTS credits		30,0	30,0	30,0	30,0	30,0	30,0	30,0	0,0	210,0

Outline of Studies

The first year, consisting of basic studies, will provide students with a fundamental knowledge of the following subjects: Business Administration, Marketing, Logistics, Accounting, Information Technology, Quantitative Methods, Law, Economics, Communication in Business, Presentation Skills and Team and Project Work.

The second year will give students an opportunity to deepen their knowledge of the subjects listed above. In addition, the students will obtain practical skills for a training period to be performed in an international business environment.

During the third year the students will be offered an extensive combination of theoretical lectures and professional studies in order to develop the personal abilities required in performing a bachelor's thesis.

1st year

281010 Business Administration 3 ECTS credits (2 Finnish credits)

Aims To give students an idea that entrepreneurship is one of the basic factors in production and the foundation of social well-being as well as to motivate students to set up businesses of their own.

Content The concept of an entrepreneur and entrepreneurship, the factors of production, the characteristics of an entrepreneur, the motives for setting up a business, business environment and social responsibility, the input and output of an organization, stakeholders of a company, types of business and merchandise, the forms of business ownership, phases of establishing a business.

Teaching Lectures 48 hours and assignments 32 hours.

Assessment Lecture and reading material test 60 %, assignments 40 %.

Literature Whitley, Richard: European Business System, 1st ed. ISBN 0-8039-8732-3.
Yrityksen Tietokirjat Oy, Establishing a Business in Finland, 2nd ed.
Colin Barrow: The Essence of Small Business, Prentice Hall, 1993, ISBN 0-13-285362-0.

281012 Marketing 4.5 ECTS credits (3 credits)

Aims To develop in the student a basic understanding of modern marketing.

Content The concept of marketing: evolution of marketing concept, marketing in a modern firm.
The marketing environment: external and internal environment.
Buying behaviour: The dimensions of buyer behaviour, consumer behaviour, organisational buying behaviour.

Content Information system: the financial accounting as an information system. The identification of the users of financial information and their information requirements. Double entry bookkeeping: concepts and principles of double entry bookkeeping. The trial balance and the preparation of the major financial accounting statements. Financial Statements: the major financial statements and their structure. Interpretation of financial statements: the use of ratios. Presentation of financial accounting data. Using information technology in accounting.

Teaching Lectures 48 hours and assignments 72 hours.

Assessment One written paper 60 % and assignment 40 %.

Literature Bendrey, Hussey, West: Accounting and Finance in Business, 1996.
Hussey, Hussey: Business Accounting, Macmillan Press, 1999.

281018 Management Accounting 4.5 ECTS credits (3 credits)

Aims To provide an introduction to the theory and practice of managerial accounting primarily in the manufacturing environment with a view to providing information to management for control and decision-making.
To develop an understanding of organisational aspects in managerial accounting.
To develop analytical skills related to the problem-solving roles of managerial accounting.

Content Management of costs.
Overhead cost management.
Accounting for production systems (includes an introduction to activity-based costing).
Cost-volume-profit analysis.

Teaching Lectures 48 hours and assignments 72 hours.

Assessment One written paper 40 % and assignment 60 %.

Literature Bendrey, Hussey, West: Accounting and Finance in Business, 1996.
Hussey, Hussey: Business Accounting, Macmillan Press, 1999.

281020 Information Technology 4.5 ECTS credits (3 credits)

Aims To give students a basic understanding of computing concepts.
To introduce students to some common business Information Technology.
To introduce the basic concepts of computing.
To enable the students to distinguish hardware and software.
To be able to use operating systems (Windows 95 /Windows NT).
To introduce students to the use of network services (Internet).

Content	Lectures:	Laboratory:
Basics of computer hardware.	3	
Operating systems (Win 3.11 / Win95 /Win NT.)	18	5
Desktop tools	6	20
Word processing (Word). Spreadsheets (Excel).		
Network services (Internet)	12	6
• E-mail • WWW • Basics of HTML		
Library services.	6	4

Teaching Lectures 64 hours and assignments 56 hours.

Assessment Continous assessment and test in computing skills.

Literature Support material: Hardware and software manuals. Additional material will be submitted during the sessions.

281022 Quantitative Methods 4.5 ECTS credits (3 credits)

Aims To enable students to acquire the necessary skills to apply mathematical techniques in accounting and business problems.

Content Algebra: Simplification of algebraic expressions; square and conjugate rules; polynomial division; solution of linear and quadratic equations; simultaneous linear equations; graphs of linear and quadratic functions; exponential and logarithmic functions; inequalities; graphical solution of equations and simultaneous linear equations.

Financial Mathematics: Supply and demand, cost and revenue, break-even analysis; arithmetic and geometric series; applications in simple and compound interest, discounts, present values, annuities, amortisation.

Teaching Lectures 60 hours and assignments 60 hours.

Assessment One written paper, 3 hours 70 % and assignment 30 %.

281024 Law 4.5 ECTS credits (3 credits)

Aims To give students a basic understanding of legal orders, legal systems and legal terms.
To provide students with an introduction to the law of contracts.
To provide students with an introduction to the company forms in Europe.

Content Introduction to legal thinking: the significance of legal order, different kinds of legal systems.
Sources of law.

Legal terms.
Contracts.
Nature of business organisations: sole traders, partnerships, companies.

Teaching Lectures 48 hours and assignments 72 hours.

Assessment Lecture and reading material test 60 %, assignments 40 %.

Literature Will be submitted during the sessions.

281026 Economics 4.5 ECTS credits (3 credits)

Aims To provide the student with an understanding of principles, tools and techniques of economic analysis and to investigate the contribution of economic theory towards an understanding of business decision-making and performance.

Content Microeconomics Basics:
The subject matter of economics: scarcity, choice, allocation, efficiency, comparative economic systems.
The market and price mechanism: elementary analysis of supply and demand, elasticity and substitution, the market and resource allocation.
Resource markets: an overview of resource markets, labour market and wage differentials, capital, land and entrepreneurial ability.

Macroeconomics Basics:
National income accounting: measures of output and income.
The Business Cycles.
Inflation.
Economic growth and development: what is economic growth and how are economic growth rates determined, productivity.
An introduction to the macroeconomic policy: fiscal policy; money and banking, monetary policy.

Teaching Lectures 48 hours and assignments 72 hours.

Assessment One written paper, 3 hours 70 % and assignments 30 %.

Literature Whitehead: Economics Made Simple.
Boyes, Melvin: Economics.
Rycroft, Robert S.: The Essentials of Macroeconomics I and II.
Parkin, Michael: Economics.

281028 Communication in Business 4.5 ECTS credits (3 credits)

Aims To provide students with in-depth knowledge and skills in business communication practices to operate efficiently in various business contexts.

Content Business Enterprises: writing, discussing and presenting company profiles including the use of graphs and charts to explain trends.
Writing in Business: in the course of examining companies students will have the

companies.

Methods and Tools: during the lectures the students will be introduced to various research methods and the necessary tools for research.

Report Writing and Presentation Skills: the students will be introduced during the lectures to the skills needed to write a business report to be able to prepare a written business plan. At the completion of the project the students will be asked to orally present their work using skills acquired during the related course.

Self-evaluation and Supervision: the students will be required to keep a journal of their work which includes their own assessment of their work. The students should learn to be objective in evaluating their own work. The students will discuss their evaluations in groups and with the supervising teacher. From these sessions the students will learn to improve their work.

Teaching Lectures 48 hours and assignments 32 hours.

Assessment Continuous assessment 100 %.

Literature Will be submitted during the sessions.

2nd year

281100 Human Resource Management 3 ECTS credits (2 credits)

Aims To provide students with the knowledge that management, especially leadership abilities, is the force that holds everything in a business enterprise in motion to achieve desired material and immaterial results.

Content Managerial roles, skills and abilities, managerial hierarchy, managerial functions, manager vs. leader, styles of leadership, situational leadership
Personnel management concept, staff planning, methods of job analysis, selection and orientation, training.

Teaching Lectures 24 hours and assignments 56 hours.

Assessment Lectures and reading material examination 70 %.
Self-supervised assignment 30 %.

Literature Graham H.T., Bennet R.: Human Resource Management, 7th ed.
ISBN 0 7121 0844 0.

Viv Shackleton: Business Leadership 1995, ISBN 0-415-12678-9.

Support Material:

Pride et al.: Business, p. 136 - 196, ISBN 0- 395- 63340-0.

Bovée C. L., Thill J.V. et al.: Management. Mc. Graw-Hill, 1993.

281101 Internationalization of Companies 3 ECTS credits (2 credits)

Aims To provide students with knowledge of different ways of going global.

Content Reasons for going international.
Roadblocks to going international.
International business transactions.
Sources of information.
Foreign trade organisations.

Teaching Lectures 32 hours and assignments 48 hours.

Assessment Examination 60 % and assignments 40 %.

Literature Koslow: Business Abroad. Gulf Publishing Company, 1996.
Luostarinen-Welch: International Business Operations. Kyriiri Oy, 1993.

281103 International Marketing 6 ECTS credits (4 credits)

Aims To develop in the student an understanding of international marketing.

Content Choosing the target market: international environment, choosing process.
Export plan: content.
International marketing mix: product, price, place and promotion.
Product decisions.
Trade fairs and exhibitions: Implementation of trade fairs or exhibition.

Teaching Lectures and exercises 70 hours and assignments 90 hours.

Assessment One written paper 40 % and assignments 60 %.

Literature Jobber David: Principles and Practice of Marketing.
Terpstra - Sarahty: International Marketing.

281104 Logistical Management and Strategies 3 ECTS credits (2 credits)

Aims To give students an in-depth knowledge of the Integrated Supply Chain Process.

Content Vendor management and purchasing strategies. Inventory management.
Transportation management. Logistics reengineering. Logistics environmental assessment. Alternative logistics strategies. Time-based logistics. Warehouse management and warehousing strategies. Logistics administration. Logistical organizational development. Beyond structure: virtuality and transparency. Global logistics. Future logistics challenges.

Teaching Lectures and case discussions 48 hours and assignments 32 hours.

Assessment Case reports and presentations, class participation, assignments 70 % and written exam 30%.

Literature Bowersox Donald J., Closs David J.: Logistical Management. The Integrated Supply Chain Process, 1996. ISBN: 0-07-114070-0.

281105 Taxation 3 ECTS credits (2 credits)

Aims To provide the student with an understanding of the Finnish taxation system and to give a view of taxation principles in another EU-country.
To introduce to the principles of personal income and property taxation in Finland.
To clarify the financial statements as the source of information for corporate taxation.
To provide the relevant information concerning taxation of sole traders, partnerships and limited companies.
To introduce the principles of V.A.T.

Content Taxation: general introduction to taxation in Finland and in EU. Tax rates of income, property and consumption.
Taxation of the Individual: taxation of earned income. Sources of income including benefits in kind. Personal allowances and reliefs. Taxation of income from capital.
Corporate taxation: financial statements as the source of taxable income and property.
Principles of taxation of partnerships and limited companies. Earned income and capital income. Taxes of different income.
Value added taxation: principles and practices, V.A.T. in bookkeeping.

Teaching Lectures 30 hours and assignments 50 hours.

Assessment Lecture and reading material examination 60 %, assignments 40 %.

Literature Hancock: Taxation - Policy and Practice.
Nightingale: Taxation - Theory and Practice.

281106 Activity-Based Costing (ABC) 3 ECTS credits (2 credits)

Aims To give students the ability to use activity-based costing as a costing method and as a tool in quality management.
To learn how to design an ABC model.
To understand how the results of ABC can be used in cost management.
To familiarize students with the use of ABC applications.
To understand the possibilities that ABC offers to quality management.

Content Activity-based costing: origins, mechanics, discussion on results, activity-based product costs, cost management.
ABC-applications: EasyABCQuick, CostControl.
Quality management: the basic principles of quality assurance and control, quality costs and their roles in quality improvement.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment Coursework (in and out of class) 30 %; written examination 40 % and assignment 30 %.

Literature Cooper- Kaplan: Cost & Effect.

281107 Financial Planning 3 ECTS credits (2 credits)

Aims To provide students with skills in the budgeting process and the process of budgetary control.

Content The purposes of budgets.
Stages in the planning process.
Functional and master budgets.
Flexible budgets and standard costs.
Computerised budgeting.
Budgetary control.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment Lecture and reading material examination 50 %, assignments 50 %.

Literature Bendrey-Hussey-West: Accounting and Finance in Business. DP Publications, 1996.
Drury: Management Accounting for Business Decisions. International Thomson Business Press, 1997.
Lucey: Costing. Ashford Colour Press, 1996.

281108 Advanced use of spreadsheets 3 ECTS credits (2 credits)

Aims To deepen the knowledge and strengthen the skills to use spreadsheets effectively.

Content Built in functions in spreadsheets.
Statistical tools.
Databases and database tools in spreadsheets.
Pivot table.
Solver application.
Creating macros.
Programming with macro/scripting language.

Teaching Lessons 40 hours and assignments 40 hours.

Assessment Assignment work.

Literature Microsoft Excel 97. Developers handbook. Microsoft Press. (Optional)

281109 Applications in Business Administration 3 ECTS credits (2 credits)

Aims To give students ability to use most common applications.

Content Presentation programs and computer graphics.
Creating and using databases.
The use of integrated applications in office work.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment Continuous assessment, test and assignment.

Literature Will be submitted at the beginning of the lessons.

281110 Statistics 3 ECTS credits (2 credits)

Aims To enable students to acquire the necessary skills to apply statistical techniques in accounting and business problems.

Content Sources of information; sampling methods, mean, median; quartiles, standard deviation; graphs used in statistics; elementary probability theory; binomial, Poisson and normal distribution; sampling errors, confidence intervals, inference; scatter diagrams, correlation, least square regression, coefficient of determination, prediction; time series, trend, index; construct of interview sheet; statistical research project, writing a report.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment One written paper, 3 hours 70 % and assignment 30 %.

281111 International and European Community Law 3 ECTS credits (2 credits)

Aims To consider the evolution and development of the European Community and the main branches of European Community law.
To define the leading principles of international law and European Community law.

Content Leading Principles of International Law.
The Historical Background to the European Community.
The Court of Justice and The Court of First Instance: organization, legal proceedings, preliminary rulings.
The Sources of Community Law.
General Principles of Law: proportionality, equality, legal certainty, procedural rights, subsidiarity, the supremacy of community law, the principles of direct applicability and direct effect.
Acts of the Institutions: regulations, directives, decisions.
Free Movement within the Single Market: customs duties and discriminatory internal taxation, quantitative restrictions and measures having equivalent effect, the free movement of workers, the right of establishment and the freedom to provide services, capital movements, competition law and policy.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment Lectures and reading material examination 60 % and assignments 40 %.

Literature Kent: Law of the European Union. Pitman Publishing, 1996.

281112 Private International Law 3 ECTS credits (2 credits)

Aims To give understanding of international contract law, of compensation for damages and of dissolving legal disputes.

Content International Contract Law: commercial agreements, contract of agency, distribution agreement, transport agreements, conventions concerning contracts.
Compensation of Damages.
Dissolving legal disputes: legal proceedings and courts, arbitration.
Enforcement: conventions.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment Lectures and reading material examination 60 % , assignments 40 %.

Literature Will be submitted at the beginning of the lessons.

281113 Professional Reading, Writing and Discussion Skills **3 ECTS credits(2 credits)**

Aims To provide students with more specific oral and written communication skills.

Content Reading, Writing and Discussions: the student will have a chance to read challenging business articles, and report on the content in writing. The articles will also be used as the base for business-oriented discussions. The focus is on learning to read large amounts of material rapidly and with understanding.
Research Papers: The students will be introduced to writing research papers and documentation styles.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment Coursework, in and out of class (in - active participation during the sessions; out of class - satisfactory completion of home assignments) 25 %; Reports 25 %; Scientific Writing Assignment 50 %.

Literature To be submitted during the lessons.

3rd year

281120 Strategic Planning **3 ECTS credits (2 credits)**

Aims The students will learn the importance of planning in enterprises in order to deal with global and regional turbulence. They also learn the meaning of vision and long-term planning when you want to be successful in business.

Content What is vision and strategy planning.
Operational management and strategic management.
The basic premises of strategic management.
Strategic behaviour in a turbulent situation.
Decision-making in a risky situation.

Teaching Lectures 32 hours and assignments 48 hours.

Assessment Lectures and reading material examination 50 % , assignments 50 %.

Literature Will be submitted at the beginning of the lectures.

281121 Foreign Trade **3 ECTS credits (2 credits)**

Aims To develop in the student a basic understanding of foreign trade procedures in a company.

Content Stages of export and import procedure.
Trade contract: content and responsibilities.
International delivery terms: incoterms as a part of a trade contract.
Documents: invoices, certificates of origin, ATA-carnet and transport documents.
Customs procedure: using a customs declaration in different situations.

Teaching Lectures and exercises 32 hours, assignments 48 hours.

Assessment One written paper 50 %, assignment 50 %.

Literature Will be submitted at the beginning of lectures.

281122 International Accounting **3 ECTS credits (2 credits)**

Aims To introduce students to the problems of international accounting and reporting.

Content International diversity in financial accounting and reporting practices in the main EU countries and in the US.
EU harmonisation and EU directives, the International Accounting Standards (IAS) of The International Accounting Standards Committee (IASC) and the US Generally Accepted Accounting Principles (US.GAAP) of the Financial Accounting Standards Board (FASB).

Teaching Lectures 30 hours and assignments 50 hours.

Assessment Coursework, in and out of class 50% and examination 50%.

Literature Christopher Nobes and Robert Parker: Comparative international accounting. Prentice Hall, New York, 1995.
Research papers, articles (to be given by the lecturer).
Support material:
Alexander, D.: Comparative International Accounting. Harcourt Brace, San Diego, 1996.
Radebaugh, Lee H. and Gray, S.J., International Accounting and Multinational Enterprises, 4th ed. John Wiley, New York, 1997.
Schweikart, Jim and Gray, S.J. and Roberts Clare: International Accounting: A Case Approach, McGraw-Hill, New York, 1995.

281123 Financial Analysis **3 ECTS credits (2 credits)**

Aims To learn the interpretation of financial statements and how accounting data are used for analytical purposes.

Content Financial accounting analysis
Profitability, funds management, liquidity and solvency
Inter-firm comparison
Gearing ratios
Investment ratios
Performance measurement.

Teaching Lectures 32 hours and assignments 48 hours.

Assessment Coursework 50 % and examination 50 %.

Literature Kinserdal: Financial Accounting - An International Perspective, Pitman Publishing, 1995.
Bendrey-Hussey-West: Accounting and Finance in Business, DP Publications, 1996.

281124 Financial Management and International Finance 4.5 ECTS credits (3 credits)

Aims To enable students to utilise financial data to assist management in performing the management functions and to survey the practical aspects of financing of international operations.

Content Sources of finance and financial institutions.
Cost of capital and capital structure.
Capital budgeting.
Risk and capital asset pricing model.
Financial ratios.
Stock market investments.
The structures of financing from an EU point of view.

Teaching Lectures 56 hours and assignments 64 hours.

Assessment Two assignments á 25 %, examination 50 %.

Literature R.B.Brockington: Financial Management, DP Publications, London.
Financing, basic concepts. Painatuskeskus. Helsinki.
The Financial Times Guide to Using the Financial Pages. Pitman Publishing. Laurence S. Ritter, William S. Silber: Principles of Money, Banking and Financial Markets.

281125 Qualitative Methods 3 ECTS credits (2 credits)

Aims To familiarise students with qualitative research methods.
To provide students with skills necessary to perform case studies.

Content The focus is on dealing with different bases for qualitative methods and analyses as well as different tendencies in these fields. Group work is emphasised. Preliminary assignment and concise exercises to be submitted.. The students will be introduced to writing a coursework, the purpose of which is to deepen their understanding of one concrete method of analysing.

Teaching Lectures and workshops 30 hours, literature and coursework 50 hours.

Assessment Reading material examination 50 %, lecture attendance and assignments 50 %.

Literature Pentti Alasuutari: Qualitative method and Cultural Studies.
Robert K. Yin: Case Study Research, Design and Methods.
Support Material:
Mathew B. Miles, A. Michael Huberman: Quantitative Data Analysis.
Robert E. Stake: The Art of Case Study Research. Sage, 1995.

281126 Law of Obligations 3 ECTS credits (2 credits)

Aims To give an introduction to the law of obligations.

Content Methods of Providing Credit: debtor-creditor agreement, hire purchase, credit-sale, credit cards, unjust enrichment, compensation for damages.
Credit Contracts: negotiation, formation, clauses, liabilities.
Securities: personal securities, real securities.
Collecting debts.
Bankruptcy: petition in bankruptcy, receivership and liquidation, bankruptcy proceedings.
Arrangement of debts and debt restructuring: grounds for arrangement of debts, proceedings, different ways of arranging debts.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment Lectures and reading material examination 60 % , assignments 40 %.

Literature Will be submitted at the beginning of the lectures.

281127 International Economics 4.5 ECTS credits (3 credits)

Aims To give the student an understanding of living in a global economy.

Content Theories of trade, commercial policy, exchange rate systems and practices, the transitional economies.

Teaching Lectures 40 hours, seminars 8 hours and assignments 72 hours.

Assessment Lectures and reading material examination 50 %.
Oral presentation and written report 50 %.

Literature Will be submitted at the beginning of lessons.

281128 Negotiations 3 ECTS credits (2 credits)

Aims To give students the opportunity to learn and practise negotiation skills.

Content Reading, writing, and discussions about articles concerning negotiation

strategies and techniques, as well as intercultural differences/similarities in international negotiations. The students will then have the opportunity to practise these strategies and techniques in class. In particular, they will be asked to carry out a sales negotiation, which will be videotaped and then reviewed by the students and the teacher. The students will also read extracts from actual contracts and agreements, and they will be asked to comment on the language in them.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment Classroom work 30 % and assignments 70%.

Literature Will be submitted during the classes.

INFORMATION SYSTEMS SPECIALIST EDUCATION

Information Systems Specialist Education leads to a Bachelor of Business Administration (BBA) degree after studies of 3.5 years. The total extent of credits is 210 ECTS credits/140 credits. The degree programme consists of the following main elements: Basic Studies (60 ECTS credits), Professional Studies (75 ECTS credits), Elective Studies (30 ECTS credits), Practical Training (30 ECTS credits) and Bachelor's Thesis (15 ECTS credits).

Information Systems Specialist Education starts with one year of basic studies. A student with previous studies in information technology and business can start the studies directly from the beginning of the second academic year. It is possible to complete the studies to a master degree at a university with additional 60 – 80 credits after the degree in Kemi-Tornio Polytechnic. All the studies will be carried out in English. The teaching methods are lectures, seminars, groupwork, exercises, independent work and assignments. Modern information technology is available for the students. The practical training can be accomplished either in Finland or abroad.

On completion of the programme the graduate

- Is capable of designing, implementing, updating and developing information systems
- Knows the application possibilities, limitations and programme development in data processing
- Knows how to purchase a computer system and make agreements concerning it
- Is capable of handling databases

The studies have been designed to give Data Processing Designers, Application Programmers, System Analysts and Data Processing Managers theoretical and practical expertise in their professions. The programme consists of courses in administrative information technology, mathematical-technical information technology, business studies and mathematics. Through these studies the students will achieve expertise in data processing as well as the problems with and potential of information technology.

The degree programme comprises the following study modules which contain individual study courses that are introduced later.

1. Data Processing, basic studies.
2. Programming, basic studies.
3. Data Communication.
4. Data Base Systems.
5. Applications.
6. Programming, advanced studies.
7. Operating Systems.
8. Hardware.
9. System Analysis.
10. Society and Its Functions.
11. Business Economics.
12. Marketing.
13. Bachelor's Thesis.
14. Practical Training.

If you intend to study the whole degree programme in Kemi-Tornio Polytechnic you have to follow the application deadline of the degree programme which is as follows: 18th June 1999. The application forms can be obtained from the education unit.

BASIC STUDIES**60 ECTS CREDITS (40 credits)****291000 Information Technology 4.5 ECTS credits (3 Finnish credits)**

Aims To give a basic understanding of computing concepts and to introduce common business information technology.

Content Computer hardware and software, operating systems, using computers and operating system, data communications, Internet, e-mail, network services, building one's own home pages.

Teaching Lectures 50 % and exercises 50 %.

Assessment Lectures and test 70% and assignments 30%.

Literature Will be submitted during the lessons.

291040 Programming Techniques and C-programming 3 ECTS credits (2 credits)

Aims To learn the basic idea of programming. How to design and build programs by using C-language.

Content Program structure, programming methods, the bases of C-language; libraries, variables, input/output functions, decisions, loops. Turbo C++ programming environment, compiling and linking.

Teaching Lectures 50 % and exercises 50 %.

Assessment Test 70% and assignments 30%.

Literature Lafore, Robert: TWG C-programming Using Turbo C++. SAMS, 1994.

291160 Application Programmes 7.5 ECTS credits (5 credits)

Aims The aim of the course is that students achieve an extensive and comprehensive knowledge of the most common application programmes and are able to use them in studies and work.

Content Word processing (MS-Word), Spreadsheets (MS-Excel), Databases (MS-Access), Presentation tools (MS-PowerPoint), Graphics (CorelDraw).

Teaching Contact hours 112, exercises and assignments 88 hours.

Assessment Test 50 % and assignments 50 %.

Literature Will be submitted during the lessons.

291161	Computer Products	3 ECTS credits (2 credits)
Aims	The course will introduce the students to the latest software and hardware for personal computers on the market. It will also show a wide range of applications for different fields on the market.	
Content	Comparison of different type computers and operating systems. General view of hardware and software on the market.	
Teaching	Contact hours 42 hours and assignments 38 hours.	
Assessment	Test	
Literature	Will be submitted during the sessions.	
291280	Computer Hardware and Software	3 ECTS credits (2 credits)
Aims	To familiarise the students with the latest software and hardware for personal computers on the market. And make the student aware of their properties and use in the real world.	
Content	Latest product selections (catalogues). Latest product development. Look at total solutions for PCs.	
Teaching	Contact hours 42 and assignments 38 hours. Student makes a comparison between equivalent products and presents the results on a seminar.	
Assessment	Test.	
Literature	Will be submitted during the sessions.	
291321	System Analysis and Design	4.5 ECTS credits (3 credits)
Aims	To give an overview of the system design process, approaches within system design and to use the most common description methods and techniques .	
Content	Developing information systems; starting points, requirements, models, methods, tools, instructions, construction stages and main features .	
Teaching	Lectures 60 % and exercises 40 %.	
Assessment	Test 40%. Self-supervised work 30%. Active participation 30%.	
Literature	Will be submitted during the lessons.	

291322	Information System Technical Planning	3 ECTS credits (2 credits)
Aims	A student can plan and implement the technical solutions. A student is able to fit the system to different kinds of software and hardware environments.	
Content	Testing, security, documentation.	
Teaching	Lectures 40 % and exercises 60 %.	
Assessment	Test 30%. Self-supervised work 40%. Active participation 30%.	
Literature	Will be submitted during the lessons.	
291361	Orientation Studies	3 ECTS credits (2 credits)
Aims	To give an idea of the structure of the Information System Specialist education, the goals, the outlines and the prospective professions. Introduction to effective studies carried out in English and planning of study strategies. To get familiar with the information sources Kemi-Tornio Polytechnic offers.	
Content	Study environment. Study programmes. Organising the studies. Library services. Information services. Databases.	
Teaching	Contact hours 28 hours and assignments.	
Assessment	Attendance.	
Literature	Study guide.	
291400	Project and Teamwork	3 ECTS credits (2 credits)
Aims	To improve the student's ability to work in groups, teams and projects. To give the students an opportunity to plan and carry out a project.	
Content	Project planning. Project administration. Leading a project. Working in a team. An individual in teams. Reporting and presentation of project planning and results. Evaluation.	
Teaching	Contact hours 42 hours, assignments 38 hours.	

Assessment Assignment 80 %, a project work and journal; active participation in classroom work 20 %.

Literature Will be submitted during the lessons.

293402 Financial Accounting 4.5 ECTS credits (3 credits)

Aims To offer a financial perspective on business structures.
To enable students to present accounting information in such a way that the financial performance and position of an entity can be appraised and controlled.
To enable students to use information technology in accounting.
To introduce students to comparative accounting in an international context.

Content Information system: the financial accounting as an information system. The identification of the users of financial information and their information requirements.
Double-entry bookkeeping: concepts and principles of double-entry bookkeeping. The trial balance and the preparation of the major financial accounting statements.
Financial statements: the major financial statements and their structure.
Interpretation of financial statements and the use of ratios. Using information technology in accounting.

Teaching Lectures and exercises 42 hours and assignments 78 hours.

Assessment Assignments 50 % and examination 50 %.

Literature Bendrey, Hussey, West: Accounting and Finance in Business.
Hussey, Hussey: Business Accounting, Macmillan, Press 1999.

291401 Entrepreneurship 3 ECTS credits (2 credits)

Aims To get general overview of the business operating process, entrepreneurship and success factors relating to business. Emphasises the importance of interaction between the company and its environment.

Content Concept of entrepreneurship.
Characteristics of an entrepreneur.
Motives for establishing a business firm.
Interest groups of the company.
Internal and external integration.
Forms of business ownership.
Phases on setting up a firm and organising a business operation.

Teaching Lectures 28 hours and assignments 52 hours.

Assessment Lecture and reading material test 70 % and assignment 30 %.

Literature Colin Barrow: The Essence of Small Business. Prentice Hall.
Pride-Hughes-Kapoor: Business, pp 2-104, 668-756.
Yrityksen Tietokirjat Oy: Establishing a Business in Finland.

291440 **Marketing** **4.5 ECTS credits (3 credits)**

Aims To give students a basic understanding of modern marketing.
To provide students with current knowledge in the application of marketing.

Content **The concept of marketing.**
The marketing environment: external and internal environment.
Buying behaviour: the dimensions of consumer behaviour, characteristics of organisational buying behaviour.
Segmentation: segmenting consumer markets and organisational markets, target marketing, positioning.
Marketing Mix Decisions: product; concept, branding, product life cycle, product development.
Price; objectives, influencing factors, pricing policies and methods.
Distribution; marketing channels, wholesaling and retailing.
Promotion; advertising, personal selling, public relations and sales promotion.

Teaching Lectures 63 hours and assignments 57 hours.

Assessment One written paper 60 % and assignments 40 %.

Literature Jobber David: Principles and Practice of Marketing. 1998.

291362 **Law I (Introduction to legal thinking)** **3 ECTS credits (2 credits)**

Aims To give students a basic understanding of legal orders, legal systems and legal terms. To provide the students with an introduction to the law of contracts and to develop the ability to make contracts.

Content Introduction to the legal thinking:

- significance of legal order.
- different kinds of legal systems.

 Sources of law.
 Legal terms.
 Contracts.

Teaching Lectures 42 hours, assignments 38 hours.

Assessment Lecture and reading material test 60 %.
Preparation work and assignments 40 %.

Literature Submitted during the sessions.

291360 **Economics** **3 ECTS (2 credits)**

Aims To provide the student with an understanding of the principles, tools and techniques of economic analysis and to investigate the contribution of economic theory towards an understanding of business decision making and performance.

To identify the economic aspects of the behaviour of business, households and government.
To evaluate the determinants of price and non-price decisions in different market environments.
To evaluate the influence of macroeconomics variables on the firm's performance.

Content The subject matter of economics: scarcity, choice, allocation, efficiency, comparative economic systems.
The market and price mechanism.
Resource markets.
National income accounting.
The business cycles.
Inflation.
Economic growth and development.
An introduction to the foreign exchange market.
An introduction to macroeconomic policy.

Teaching Lectures 28 hours and assignments 52 hours.

Assessment One written paper, 3 hours (70 %) and assignments 30 %.

Literature Whitehead, G: Economics (Made Simple).

291487 Swedish for Finnish students I 3 ECTS credits (2 credits)

Aims To develop communication skills in Swedish, written and oral, in basic situations of everyday life and work.

Content Everyday communication.
Studies.
Applying for job.
Phrases in social situations.
Spare time: hobbies, travelling, shopping, eating out etc.
Working communication.
Introducing a company.
Customer service.
Demonstrating a product.
Visiting a company.
Phoning at work.

Teaching Lectures 42 hours and assignments 38 hours.

Assessment Written test.
Oral presentations.
Active participation in class.

Literature Medspelare i affärer (WSOY).
Affärer med svenskar (FINTRA).
Bättre affärskommunikation (FINTRA).

291486 **Finnish for Foreigners I** **3 ECTS credits (2 credits)**

Aims For students who have not been studying Finnish before.
To enable students to act in everyday situations during their studies.
To increase communication.

Content Everyday situations: visiting offices, shops, working with other students, Finnish family, manners.
Basics in grammar.

Teaching Contact lectures 60 hours and assignments 20 hours.

Assessment Assignments 100 % and 80 % attendance.

Literature Will be submitted during the lessons.

291484 **English for International Business** **3 ECTS credits (2 credits)**

Aims To provide students with knowledge and skills in business communication practices to operate efficiently in various business situations by using modern information technology to convey messages. Special focuses will be on presentations, meetings and negotiations in an international business context.

Content Aural, oral and written business communication.
Formal and informal meetings, procedure, language and documents.
Process of negotiation, strategy, tactics, memos and reports.
Intercultural aspects of negotiation.
Planning, carrying out, and assessing a meeting and sales negotiation with relevant documents.

Teaching Contact hours 75 %, preparation work and assignments 25 %.

Assessment 80 % attendance required, active participation in classroom work; thorough preparation and successful completion of assignments on time.

Literature Submitted by the instructor during sessions.

291485 **Professional Reading, Writing and Discussions in English** **3 ECTS credits (2 credits)**

Aims To improve students' ability to read material written for their field of specialisation, such as articles from manuals, handbooks, professional journals, reports etc., and to give students the opportunity to discuss such material. To introduce students to the skills needed for writing professional documents in their area of specialisation.

Content Reading assignments.
Discussion of articles.
Lectures on professional writing skills.
Writing assignments.

- Teaching** Contact hours 75 %, preparation work and assignments 25 %.
- Assessment** 80 % attendance required, preparation and comprehension of reading assignments; successful completion of writing assignments on time ; active participation in class.
- Literature** Submitted by the instructor during sessions; students' own choice of articles.

PROFESSIONAL STUDIES **75 ECTS CREDITS (50 credits)**

293042 Visual Basic Programming **3 ECTS credits (2 credits)**

Aims The aim of this course is to make a student acquainted with visual programming tools, how to construct a standardised user interface, programming language and technique.

Content Layout design, visual objects, methods, properties, events, visual programming.

Teaching Lectures 50% and exercises 50%.

Assessment Test 50% and project work 50%.

Literature Halvorson Michael: Microsoft Visual Basic 6.0 Professional (Step by Step) Paperback - 656 pages Bk&Cd Rom edition (August 1998). Microsoft Press; ISBN: 1572318090.
Reference literature:
Visual Basic 6 Complete, Sybex (Ed.), paperback edition, 1008 pages (March 1999). ISBN: 0782124690.

292041 C-programming **4.5 ECTS credits (3 credits)**

Aims The aim of this course is to develop the student's ability to create C programs and master the most basic elements and concepts in programming.

Content Variables, data types, program flow control, functions, modular programming, arrays, strings, standard libraries, recursion, iteration, files, bit-operators, pointers.

Teaching Lectures 40%, exercises 30% and project work 30%.

Assessment Test 50% and project work 50%.

Literature Lafore Robert: C Programming Using Turbo C++. Sams Publishing, ISBN 0-672-30399-X.
Reference literature: Kernighan Brian W. & Dennis M.: The C Programming Language. Ritchie Prentice Hall. ISBN: 0131103628.

292120 Databases/SQL **7.5 ECTS credits (5 credits)**

Aims The aim of this course is to import knowledge about the importance of databases in IT and creating of relational databases and structure design.

Content Database management system, data modelling, database design, SQL query language, embedded SQL, database implementing.

Teaching Lectures 40%, exercises 30% and project work 30%.

Assessment Test 50% and project work 50%.

Literature The Essence of SQL : A Guide to Learning Most of SQL in the Least Amount of Time by David Rozenshtein, Tom Bondur (Editor) , Peer to Peer Communications; ISBN: 0964981211.

Reference literature:

Date, C.J.: An Introduction to Databasesystem. Addison-Wesley Publishing Company, 1986.

Elmastri, R., Navathe, S.B.: Fundamentals of Databasesystems, 2nd ed. Addison-Wesley Publishing Company.

293001 Operating Systems 4.5 ECTS credits (3 credits)

Aims The course will teach knowledge of different types of operating systems, their architecture and function. Students learn how to install and use different network operating systems.

Content Fundamentals of the most common operating systems: file system, disk operations, memory management.

Multi-user systems: user-rights, processes, data security.

Networking: user interface, protocols, user rights, user profiles, administration of shared resources, security.

Teaching Lectures 63 hours and assignments 57 hours.

Assessment Test.

Literature Will be submitted during the sessions.

293240 Data Communication 3 ECTS credits (2 credits)

Aims The course will teach the fundamentals of data communications. Students learn different ways to communicate from one PC to other PCs. The aim is to familiarise students with the Internet and its possibilities.

Content Fundamentals of data communication in PC environment.

Different alternatives for communications in PC environment.

Networking with PCs.

The Internet and its possibilities.

Solutions in the Internet.

Teaching Lectures and exercises 42 hours.

(Exercises: Install modems, direct cable connections and Internet connections. Install PCs into a local area network in MS Windows workgroup environment.)

Assignments 38 hours.

Assessment Test.

Literature Will be submitted during the lessons.

292323 System Construction 4.5 ECTS credits (3 credits)

Aims To give an overview of models, methods, tools, to use tools to build a system.

Content Data-oriented design and function-oriented design.

Teaching Lectures 60 % and exercises 40 %.

Assessment Test 40%.
Self-supervised work 30%.
Active participation 30%.

Literature Will be submitted during the lessons.

292326 System Analysis and Design Project 3 ECTS credits (2 credits)

Aims To enable the students to practise the theoretical studies in a system analysis and design project.

Content To carry out a system analysis and design project in practise based on the theoretical studies.

Teaching Introduction, guidance and lectures 35 hours, assignment 45 hours.

Assessment Assignment 100 %.

Literature Will be submitted during the lessons.

293324 Object-oriented System Construction 3 ECTS credits (2 credits)

Aims To introduce the student to object-oriented analysis, design and theory of programming, basic concepts and design methods.

Content OOA,OOD,OOP.

Teaching Lecture 24 hours, assignments 24 hours and literature 32 hours.

Assessment Lecture 20%.
Self-supervised work 30%.
Test 50%.

Literature Jacobson: Object-oriented Software Engineering.
Pressman: Software Engineering- a Practitioner's Approach.

293493	Programming Project	3 ECTS credits (2 credits)
Aims	To design and build a program as a project.	
Content	Design and build a program by using methods studied in the previous courses. Design and write required documentation.	
Teaching	Lectures 50 % and assignment 50 %.	
Assessment	Self-supervised work 100%.	
Literature	Lafore, Robert; TWG C-programming Using Turbo C++. SAMS, 1994.	
293121	Database Programming (Delphi)	3 ECTS credits (2 credits)
Aims	The aim of this course is to give knowledge on how to model and create a database, record, modify, apply data and manage strategies for a multi-user environment in a network environment.	
Content	Relational and object model, client server, referential integrity, database performance, database optimising, Delphi programming.	
Teaching	Lectures 50% and exercises 50%.	
Assessment	Project work 100%.	
Literature	Charlie Calvert's Delphi 4 Unleashed (Unleashed), Charlie Calvert Paperback - 1152 pages Bk&CD-ROM edition (November 1998), Sams. ISBN: 0672312859.	
293200	Windows programming/C++	4.5 ECTS credits (3 credits)
Aims	To design and build Windows programs by using C++-language. To understand the structure of object-oriented programming.	
Content	Programming environment, tools, objects, properties, designing and building the userinterface, program structure, methods.	
Teaching	Lectures 50 % and exercises 50 %.	
Assessment	Self-supervised work 100%.	
Literature	Reisdorph, Kent: Teach Yourself Borland C++-Builder in 21 days. SAMS, 1998	
292325	Human – Computer Interaction	3 ECTS credits (2 credits)
Aims	To learn how to build a user interface.	
Content	Developing a user interface, requirements, principles, tools.	
Teaching	Lectures 60 % and exercises 40 %.	

Assessment Test 40%.
Self-supervised work 30%.
Active participation 30%.

Literature Preece, J., Rogers.Y & Skarp.H, et al.: Human- Computer Interaction, Addison-Wesley, 1994.

293080 Data Network Construction 3 ECTS credits (2 credits)

Aims To teach the students to plan and build a PC network. Also to teach how to test and dimension networks according to customers' needs.

Content Network topologies.
Network planning.
Installation and dimensioning networks.
Supporting networks and security.

Teaching Contact hours 42 hours, assignments 38 hours.

Assessment Test.

Literature Will be submitted during the lessons.

292241 Data Network Operating Systems 4.5 ECTS credits (3 credits)

Aims The students learn how to install and use different network operating systems.

Content Windows NT.
Linux, Unix.
System managers tasks.
Data operators tasks.
Data security.

Teaching Exercise: the students install different operating systems and practice the system manager's tasks in that environment according to the teacher's instructions.
Lectures 63 hours, assessments 57 hours.

Assessment Test.

Literature Will be submitted during the lessons.

292403 Management Accounting 4.5 ECTS credits (3 credits)

Aims To provide an introduction to the theory of managerial accounting with the view to provide information to management for control and decision-making.
To develop analytical skills in the problem-solving roles of managerial accounting.
To provide students with basic skills in the budgeting process and the process of budgetary control.

Content Management of costs.
Overhead cost management.
Accounting for production systems (includes an introduction to activity-based costing ABC).
Cost-volume-profit analysis.
Budgeting and budgetary control.
Using information technology in ABC and budgeting.

Teaching Lectures and exercises 48 hours, assignments 72 hours.

Assessment Assignments 50 % and examination 50 %.

Literature Bendrey, Hussey, West: Accounting and Finance in Business.
Hussey, Hussey: Business Accounting. Macmillan Press, 1999.

293320 Mathematics and Statistics 4.5 ECTS credits (3 credits)

Aims To provide the students with understanding of mathematical terminology and methods for problem solving, data analysis and decision making with the help of mathematical models.
To enable the students to acquire the necessary skills in applying statistical techniques in problems.

Content Numerical methods and computing; equations, integrals.
Sources of information: sampling methods, mean, median; quartiles, standard deviation; graphs used in statistics; elementary probability theory; binomial, Poisson and normal distribution; sampling errors, confidence intervals, inference; scatter diagrams, correlation, least square regression, coefficient of determination, prediction; time series, trend, index; statistical research project.

Teaching Lectures and exercises 56 hours, assignments 64 hours.

Assessment Test and assignment.

Literature Will be submitted during the lectures.

293404 Law II (European Community Law and ADP Legislation) 3 ECTS credits(2 credits)

Aims To provide students with a basic understanding of EC Law.
To examine legislation concerning information technology.

Content Sources of EC Law.
Free Movement in the EC.
Copyright.
Privacy Protection Act.
ADP Crimes.
Law concerning the Internet.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment Lecture and reading material test 60 %.
Assignments 40 %.

Literature Submitted during the sessions.

292404 Leadership and Personnel Management 3 ECTS credits (2 credits)

Aims To get students familiar with the skills and abilities needed for management and basic management functions. To get an outlook of company's personnel planning, recruitment, maintenance and development.

Content Managerial roles, skills and abilities, managerial hierarchy and duties, manager vs. leader, styles of leadership.
Situational leadership.
Personnel management concept, staff planning, methods of job analysis, selection and orientation, training.

Teaching Lectures 25 hours, assignments and reading materials 55 hours.

Assessment Lecture and reading material examination 70 %, assignment 30 %.

Literature Shackleton Viv: Business Leadership. 1995. ISBN-415-12678-9.
Graham H.T.: Human Resource Management. 7th ed ISBN 0 7121 0844 0.

295521 Scientific Writing 4.5 ECTS credits (3 credits)

Aims To provide the student with the ability and facilities to prepare scientific reports and to get familiar with professional publications.

Content Professional writing in English.
Scientific terminology in information technology.
Process writing and reporting.
Scientific criteria.
Professional publications.
Outline of the Bachelor's thesis.

Teaching Lectures 63 hours and assignments 57 hours.

Assessment Assignment.

Literature Will be submitted during the lessons.

295522 Research Studies 3 ECTS credits (2 credits)

Aims The aim is that students get acquainted with different forms of research activity and know their application possibilities and viability in their studies and practical work. They perceive the impact of research on their studies and know how to utilise effectively different sources of information. They can perform the different tasks of a research project.

Content Philosophy of science, polytechnic research, use of data services, research project work, empirical research, research methods, information technology as a tool in research.

Teaching Contact hours 32 hours and assignments 48 hours.

Assessment Assignment.

Literature Will be submitted during the lessons.

295520 Bachelor's thesis 15 ECTS credits (10 credits)

Aims Students can apply previously learned knowledge and skills in a developing or research project, and know how to make a thesis on their own special field of education. Projects are closely connected with practical working life.

ELECTIVE STUDIES 30 ECTS CREDITS (20 credits)

293043 WWW Programming 3 ECTS credits (2 credits)

Aims After this course students are able to create WWW programs into a Web server. They can program a database application which can be used through the Internet/ Intranet.

Content Introduction to Web programming.
HyperText Markup Language (HTML).
Active Server Pages (ASP).
JavaScript.

Teaching 56 hours.

Assessment Assignment.

Literature Will be submitted during the lessons.

294044 Cobol Programming 3 ECTS credits (2 credits)

Aims To introduce students to the basics of Cobol programming.

Content Cobol compiler, Cobol language, program tests and documentation.

Teaching Lectures 32 hours and assignments 48 hours.

Assessment Assignment.

Literature Will be submitted during the lessons.

294045 C++ Programming I 3 ECTS credits (2 credits)

Aims To learn the bases of C++- language, and to design and build a program by using C++-language.

Content The program structure, variables, input and output functions, decisions, loops, functions, arrays and pointers.

Teaching Lectures and exercises 42 hours, assignments 38 hours.

Assessment A written test.

Literature Liberty, Jesse: Teach yourself C++ Programming in 21 days. Sams Publishing, 1994.

294046 C++ Programming II 3 ECTS credits (2 credits)

Aims To use objects in C++-programs and to design and build object-oriented programs by using C++-language.

Content The program structure, handling files, objects, classes, inheritance, polymorphism, destructors, variables, memory management.

Teaching Lectures and exercises 42 hours, assignments 38 hours.

Assessment Assignment.

Literature Liberty, Jesse: Teach yourself C++ Programming in 21 days. Sams Publishing, 1994.

294047 Multimedia Programming I 3 ECTS credits (2 credits)

Aims To give students the ability to do interactive movies. To learn the basic features of Macromedia Director 6.

Content Macromedia Director 6 and its basic animation techniques of text and objects.

Teaching Lectures 40 hours, assignment 40 hours (a movie).

Assesment Assignment 80 % and lectures 20 %.

Literature To be given during the lessons.

294048 Multimedia Programming II 3 ECTS credits (2 credits)

Aims To give students the ability to do more interactive movies. To learn features of Macromedia Director 6 and Lingo-scripts. To make 3D objects.

Content Macromedia Director 6, Extreme 3D, Xtras and Lingo scripts.

Teaching Lectures 40 hours and assignment 40 hours (a movie).

Assessment Assignment 80 % and lectures 20 %.

Literature To be given during the lessons.

294049	Visual Basic Programming II	3 ECTS credits (2 credits)
Aims	To build database programs, client- server programs and to use VBA script in Office97 documents.	
Content	Building and handling databases, using VBA script in Office97 documents (Word, Excel, PowerPoint and Access).	
Teaching	Lectures and exercises 42 hours, assignments 38 hours.	
Assessment	Assignment.	
Literature	Will be submitted during the lessons.	
294050	Image Editing	3 ECTS credits (2 credits)
Aims	To give students the ability to use image editing applications.	
Content	Scanning images, saving images for different purposes, manipulations most commonly performed on images. Manipulating photographs and graphics. Use of a scanner and scanning programs and PhotoShop image editing program.	
Teaching	Lectures 40 hours and assignments 40 hours.	
Assessment	Continuous assessment 30 % and assignment 70 %.	
Literature	Will be submitted during the lessons.	
294051	Sound Editing	3 ECTS credits (2 credits)
Aims	To give students the ability to use different kinds of audio formats. To learn how to record voices and how to format and handle them.	
Content	Using Audio programs; CoolEdit, WinAmp, RealEncoder etc.	
Teaching	Lectures 40 hours and assignments 40 hours.	
Assessment	Assignment 80 % and lectures 20 %.	
Literature	Will be submitted during the lessons.	
294052	Hypertext Documents	3 ECTS credits (2 credits)
Aims	To enable students to create hypertext documents. The students will be able to design the hierarchical structure of the document, to define keywords and links and effects for presentation.	
Content	Document planning, hypertext editors, designing an application.	

Teaching Lectures 32 hours and assignments 48 hours.

Assessment Assignment.

Literature Will be submitted during the lessons.

294053 Java Programming 3 ECTS credits (2 credits)

Aims To familiarise the students with Java programming language, object-oriented programming and designing applications with Java language.

Content Java environment, basic elements of Java language, objects, programming of graphical user interface, functions and structure of an application.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment An assignment.

Literature Will be submitted later.

294410 Internet Marketing 3 ECTS credits (2 credits)

Aims To provide students with basic understanding in marketing with the help of the most modern technology and networks. Integrating the Internet into company's marketing strategy.

Content Using the Web for marketing.
Customer service in the Web.
The Usable Web.
Marketing mix and the Internet.
Designing a commercial Web-site by using an editor program (FrontPage/Browser editor).

Teaching Lectures 40 hours and assessments 40 hours.

Assessment Written test 50 % and assignment 50 %.

Literature Will be submitted during the lessons.

294409 Electronic Business 3 ECTS credits (2 credits)

Aims To provide students with basic understanding in doing business using the most modern technology and networks. This course provides an overview of how the Internet is affecting business today.

Content The Internet business environment.
Network business strategy.

Telematic tools.
Consumer business vs. B-to-B business.
E-commerce vs. e-business.
E-business areas.
Virtual enterprises.
Business forces and the future.

Assessment Written test 50 % and assignment 50 %.

Literature Will be submitted during the lessons.

294054 Project Administration Tools 3 ECTS credits (2 credits)

Aims To give students the ability to use different project administration tools for project planning and administration.

Content MS-Project as a tool in project work, use of other software in project work.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment Continuous assessment 30 % and assignment 70 %.

Literature Will be submitted during the lessons.

294407 Business Administration 3 ECTS credits (2 credits)

Aims To provide the students with the idea that employees - human capital - are the most valuable assets of the company. To give a mental image of the how important work motivation and commitment to the organisational goals are for the success of business.

Content Firm's "human capital".
To explain why people work.
Career development.
Frustration and how to reduce frustration.
Informal groups.
Formal organisation and structural options in organisational design.
Need and process theories of work motivation.
Work motivation techniques.

Teaching Contact hours 42 and assignments 38 hours.

Assessment Lecture and reading material test 70 % and assignment 30 %.

Literature Jones Gareth R.: Organizational Theory.
Robbins Stephen P.: Organizational Behaviour.

294408 Law III (Business Law) 3 ECTS credits (2 credits)

Aims To provide students with an introduction to company law: who can establish a

company and how it should be done, organs and their decision-making systems, right of representation and liabilities.
To give students a basic understanding of the regulations of marketing.

Content Right to establish a company.
Company forms.
Regulations of marketing.
Consumer protection.

Teaching Lectures 40 hours and assignments 40 hours.

Assessment Lecture and reading material test 60 % and assignment 40 %.

Literature Will be submitted at the beginning of the course.

294494 **Increasing Intercultural Awareness** **3 ECTS credits (2 credits)**

Aims To sensitise students to intercultural differences and similarities in the international business environment, and to help them to understand and appreciate issues involved in intercultural interaction.

Content Articles to be read for each session with written assignments to be discussed during the sessions.
Cultural awareness group project to be reported orally and in writing.
Take-home exam.

Teaching Sessions 24 h and independent work 56 h.

Assessment 80 % active attendance is required, a more exact grading scheme will be submitted during the first session together with the course handout.

Literature Will be submitted during the first session.

294493 **Lapland in English** **3 ECTS credits (2 credits)**

Aims To discuss and learn about Lapland using English. To give students an opportunity to learn more about Lapland and to practice the vocabulary needed in English to discuss those topics, as well as to give students the opportunity to plan/carry out a hiking trip in Lapland.

Content Vocabulary related to topics dealing with Lapland, such as local wildlife, flora and fauna, recreational activities, climate and Sami culture. Discussions will be organised to make use of this vocabulary, and simulation exercises will be carried out. Planning and organisation will be practiced in conjunction with the trip to Lapland.

Teaching 15 hours + trip planning

Assessment Active class participation and a written report at the end of the course.

Literature Indicative reading: Brochures, Foley and Hurd: A Learner's Glossary of Lapland. University of Lapland, Language Center.

294480 **Finnish I for Finnish students** **3 ECTS credits (2 credits)**

294481 **Finnish II for Finnish students** **3 ECTS credits (2 credits)**

294482 **Finnish for Foreigners II** **3 ECTS credits (2 credits)**

Aims For students who have studied Finnish basics.
To increase the student's ability to use the Finnish language, increasing communication.

Content Reading, listening to, talking and writing Finnish.

Teaching Contact lectures 60 hours and assignments 20 hours.

Assessment Assignments 50 %, test 50 % and 80 % attendance.

Literature Will be submitted during the lessons.

294056 **Swedish for Finnish Students II** **3 ECTS credits (2 credits)**

Aims To develop communication skills in Swedish, written and oral, in business context.

Content Improving vocabulary, focusing on students' lines of specialisation

- basic business correspondence.
- oral skills.
- EDP and economic terminology.

Teaching Lectures 42 hours and assignments 38 hours.

Assessment Written test.
Writing assignments.
Active participation in class.

Literature Medspelare i affärer 2 (WSOY).
Skriv och ring (WSOY).
Magazines and newspapers.

294083 **Swedish Discussions** **3 ECTS credits (2 credits)**

Aims To improve students' skills in oral communication in various contexts focusing on students' lines of specialisation.

Content Discussions, meetings, presentations and report writing.

Teaching Lectures 42 hours and assignments 38 hours.

Assessment Active participation in class.
Preparation for discussions.
Writing assignments.

Literature Medspelare i affärer 2 (WSOY).
Magazines and newspapers.

294486 English 3 ECTS credits (2 credits)

294487 French I 3 ECTS credits (2 credits)

294489 Russia 3 ECTS credits (2 credits)

294490 Spanish 3 ECTS credits (2 credits)

294491 German 3 ECTS credits (2 credits)

Aims To develop/ introduce communication skills in German, written and oral in basic situations of everyday life and working life depending on students' prior studies in German.

Content Social situations.
Business situations.

Teaching Lectures 42 hours and assignments 38 hours.

Assessment Written test.
Writing assignments.
Active participation in class.

Literature Beginners: Jawohl (WSOY).
Advanced: Unternehmen Deutsch (WSOY).

294492 Discussions 3 ECTS credits (2 credits)

Aims To improve students' oral language skills on the base of business life situations.

Content Discussions in business situations.

Teaching Contact education 24 hours and assignment 16 hours.

Assessment Active participation in contact lessons and 80% obligatory attendance, drawing up presentations and oral test.

Literature Magazines and newspapers.

294363 Physical Education 3 ECTS credits (2 credits)



DEGREE PROGRAMME IN HEALTH CARE AND NURSING

Bachelor of nursing

The Unit of Health Care and Nursing offers studies which enable students to work as nurses and health visitors in hospitals or health centres as well as in homes for the elderly, service houses and other residential settings. In the future there will be more jobs available in the area of health care in the private sector, as an employee or as an entrepreneur, and the studies prepare the students for these opportunities. The graduated students are qualified to work in Finland as well as abroad.

The aim of the programme is to provide the students with a broad core knowledge base as well as the advanced knowledge necessary to fulfill current and future needs in health care. The students receive a good knowledge of nursing science and nursing research so as to be able to contribute to the development of nursing. In the learning process the student formulates links between practical experience and theoretical concepts. These links require the integration of theory and practice and that is facilitated by, for example, reflection on practice. Students are also offered a good opportunity to promote their personal growth and development. The role of the lecturer is that of a resource and the facilitator of the learning process.

The duration of the studies is 3.5 years and the extent of credit 210 ECTS credits/140 credits. The degree programme comprises the following main elements: Basic Studies 60 ECTS credits, Professional Studies 112.5 ECTS credits (compulsory studies 70.5 ECTS credits and alternative advanced studies 42 ECTS credits), Elective Studies 22.5 ECTS credits and Bachelor's Thesis 15 ECTS credits. Each term includes a period of clinical practice in a specific area and the total portion devoted to practice is 82.5 ECTS credits. The language of the instruction is either Finnish or a combination of Swedish and English. International students can participate in instruction in English.

Methods used by the students and teachers are lectures, seminars, workshops, laboratory work, practicals, projects, independent work and assignments and clinical practice. The team-teaching method is also used by the teachers in order to integrate the subjects of the modules into a relevant whole.

If you intend to study the whole degree programme in Kemi-Tornio Polytechnic, please note that the education programme follows the Finnish national common application deadlines which vary from year to year. Please inquire at the education unit for details of this year's deadlines. The application forms can be obtained from the education unit.

BASIC STUDIES

60 ECTS credits (40 credits)

The first year

The first module

INTRODUCTION TO POLYTECHNIC STUDIES

8.25 ECTS credits
(5.5 Finnish credits)

Aims

The student

- adapts him/herself to the Polytechnic's studying environment.
- learns the sufficient knowledge and technical skills to work.
- with the computers needed in studies and at work.
- becomes familiar with the most important computer.
- applications in the field of health care.
- gains the ability to study independently.

Content

51PY0010	Orientation studies	1.5/1
51PY0240	Philosophical Study of Humanity and Ethics	1.5/1
51PY0020	Information Skills	0.75/0.5
51PY0030	Computer Science and ADP	3/4.5
51PY0190	Statistics	1.5/1

Teaching Tutoring in groups and individually, lectures, workshops, independent work.

Assessment Written tests, skill test and independent assignments.

Literature Topical literature.

The second module

COMMUNICATION AND INTERACTION

6.75 ECTS credits
(4.5 credits)

Aims

The student

- develops his/her interactive skills that are needed in the field of health care as an individual and in a group.

Content

51PH0040	Written communication	1.5/1
51PH0040	Spoken communication	0.75/0.5
51PH0050	Swedish	1.5/1
51PH0060	English	1.5/1
51PY0070	Interaction and Group Dynamics	1.5/1

Teaching Lectures, exercises, independent assignments.

Assessment Active participating in teaching, 80 % in attendance and independent assignments.

Literature Topical literature.

The third module

PHYSICAL AND PSYCHOLOGICAL FUNCTIONS 12.75 ECTS credits (8.5 credits)

Aims The student

- recognises the physical and psychological functions that adjust the life of a person.

Content	51PH0080	Anatomy and Physiology	4.5/3
	51PH0090	Pathophysiology	0.75/0.5
	51PH0100	Physical Exercise	1.5/1
	51PH0110	Psychology	3.75/2.5
	51PH0030	Science of Education	1.5/1
	51AH0030	Nutrition	0.75/0.5

Teaching Lectures, workshops, exercises, independent assignments.

Assessment Written tests and independent assignments.

Literature Topical literature.

The fourth module

ENVIRONMENT AND SOCIETY 8.25 ECTS credits (5.5 credits)

Aims The student

- becomes aware of different conceptions of humanity and of health care as a part of the society.

Content	51PY0150	Economics	0.75/0.5
	51PH0130	Sociology	1.5/1
	51PY0140	Social Policy	1.5/1
	51PH0160	Public Health Science	1.5/1
	51PY0170	Environment and Health	0.75/0.5
	51PH0200	Art and Culture	1.5/1
	51PH0150	Creativity	0.75/0.5

Teaching Lectures, workshops, independent assignments.

Assessment Written tests and independent assignments.

Literature Topical literature.

The fifth module

FOUNDATIONS OF PROFESSIONAL NURSING 24 ECTS credits (16 credits)

Aims The student

- understands nursing as a profession and is motivated to study and develop his/her work.

Content	51PH0210	Basic Studies of Nursing	3.75/2.5
	51PH0220	Helping Methods in Nursing	6/4

51AH0010	Drug Administration Skills	1.5/1
51AH0020	Gerontological Nursing	1.5/1
51PH0230	First Aid	1.5/1
51AH0040	Microbiology, Asepsis, Hospital Hygiene	2.25/1.5
51PH0250	Practice	7.5/5

Teaching Lectures, classroom practice, workshops, independent assignments, clinical practice.

Assessment Active participating in teaching and 80 % in attendance, written tests, skill tests, independent assignments, clinical practice.

Literature Topical literature.

COMPULSORY PROFESSIONAL STUDIES **70.5 ECTS credits**
(47 credits)

The third term

MEDICAL - SURGICAL NURSING
AND PERIOPERATIVE NURSING **27.75 ECTS credits**
(18.5 credits)

The first module:

THE BASIS OF MEDICAL - SURGICAL AND
PERIOPERATIVE NURSING **3/2**

Aims The student

- forms a general picture of clinical laboratory medicine and radiology and understands their significance and physiological background as well as the clinical application in caring for the patient
- is familiar with different medical substances, pharmaceutical products and their effect mechanisms and understands their proper use in different diseases and functional disorders
- is able to counsel patients with a special diet
- is able to meet people in crises of life.

Content	51AH0050	Clinical Laboratory Medicine and Radiology	1.125/0.75
	51AH0060	Pharmacology	0.375/0.25
	51AH0070	Crisis Intervention	0.375/0.25
	51AH0080	Dietetics	0.375/0.25

Teaching Lectures, seminars, classroom practice, clinical practice.

Assessment Written test, independent assignments, active participation in teaching and clinical practice.

Literature Topical literature.

The second module
MEDICAL NURSING

10.5/7

Aims	The student	
	<ul style="list-style-type: none"> • learns to help patients with biopsychosocial problems caused by their illness and its treatment. • learns to prepare patients for different examinations, operations and other procedures by observing and nursing them according to the known nursing principles. • acquires the ability to guide and teach patients and their next of kin to cope with their illness and the treatment as well as to promote health and rehabilitation. • is able to report on the nursing process both orally and in writing • increases her/his knowledge in prevention of infections and learns to act according to the aseptic rules. • takes advantage of the latest knowledge in the science of nursing. 	
Content	51AH0090	Nursing Strategies 1.5/1
	51AH0100	Internal Medicine 1.5/1
	51AH0110	Treatment of Skin Diseases 0.75/0.5
	51AH0083	Anatomy and Physiology 0.75/0.5
	512AH030	Medical Practice 6/4
Teaching	Lectures, classroom practice, seminars, individual/group assignments, independent work, clinical practice.	
Assessment	Written tests, assignments, clinical practice.	
Literature	Topical literature.	

The third module:
SURGICAL AND PERIOPERATIVE NURSING

14.25/9.5

Aims	The student	
	<ul style="list-style-type: none"> • becomes acquainted with the nature of perioperative nursing and forms an overall picture of the perioperative nursing process + see the aims above.	
Content	51AH0120	Nursing Strategies 1.5/1
	51AH0130	Surgery 1.5/1
	51AH0140	Perioperative Nursing 1.5/1
	51AH0150	Anaesthesiology 0.75/0.5
	51AH0301	Surgical Practice 6/4
	51AH0301	Perioperative Practice 3/2
Teaching	Lectures, seminars, classroom practice, clinical practice.	
Assessment	Written tests, independent assignments, active participation in lectures and clinical practice.	

Literature	Topical literature.	
51VH0011	Electives; theoretical studies	3/2
	The fourth term	
	HEALTH PROMOTION	18.75 ECTS credits (12.5 credits)
	The first module:	
	THE BASIS OF HEALTH PROMOTION	3/2
Aims	The student <ul style="list-style-type: none"> • understands the close interaction between an individual's health and the community, environment and society. • knows different methods of health promotion and is able to use them. 	
Content	51AH0160 Health Education	1.5/1
	51AH0295 Community Care	0.75/0.5
	51PY0142 Social Policy	0.75/0.5
Teaching	Lectures, seminars, written and practical assignments.	
Assessment	Written and practical assignments.	
Literature	Topical literature.	
	The second module:	
	PROMOTION OF THE HEALTH OF CHILDREN	
	AND ADOLESCENTS	4.5/3
Aims	The student <ul style="list-style-type: none"> • is aware of the progress, goals and methods of the health care of children and adolescents. • knows the factors affecting on children's and adolescents' development and health. • is acquainted with the priorities of preventive health care and the most essential methods in the health care of children and adolescents. 	
Content	51AH0170 Health Care of Children and Adolescents	1.5/1
	51AH0300 Practice in Child Health Clinics / Maternity Clinics, in School and Student Health Care	3/2
Teaching	Lectures, seminars, classroom practice, clinical practice.	
Assessment	By agreement.	
Literature	Topical literature.	

**The third module:
PROMOTION OF THE HEALTH OF ADULTS**

6/4

Aims The student

- is aware of the development, goals and methods in the health care of adults and in occupational health care.
- is acquainted with the key aspects of the preventive health care and with the occupational health care fixed by law.
- is familiar with the examinations and treatments during pregnancy, childbirth and childbed.
- is aware of the role of maternity care in the health care system.

Content

51AH0180	Health Care of Adults	1.5/1
51AH0190	Maternity Health Care and Obstetrics	1.5/1
51AH0300	Practice in Occupational Health Care	3/2

Teaching Lectures and classroom practice, clinical practice.

Assessment Written assignments or tests, clinical practice.

Literature Topical literature.

**The fourth module:
PROMOTION OF THE HEALTH OF OLDER ADULTS
AND DISTRICT NURSING**

5.25/3.5

Aims The student

- becomes familiar with gerontological care and is aware of the factors affecting on the older adults' health.
- becomes familiar with the organisation of the public health care.
- is aware of the normal signs and changes and knows the theories of aging.

Content

51AH0200	Gerontological Care	0.75/0.5
51AH0210	Geriatrics	0.75/0.5
51AH0220	Treatment of Eye Diseases	0.75/0.5
51AH0300	Practice in Home Nursing	3/2

Teaching Lectures, practical assignment, clinical practice.

Assessment Written tests or assignments, clinical practice.

Literature Topical literature.

**The fifth module:
BACHELOR'S THESIS**

3 ECTS credits (2 credits)

Aims The student

- is familiar with the goals and principles of nursing research.
- acquaints him/herself with her/his field of research.
- knows the stages of the quantitative research process and alternative solutions

made during the process.

- is able to make good use of scientific publications.
- adopts the ethics of nursing research.
- knows the basic concepts of statistics and can use tables and figures when presenting the findings of research.

Content	51OH0010 Nursing Research	1.5/1
	51PY0190 Mathematics and Statistics	1.5/1

Teaching Lectures, independent work, assignments.

Assessment Written test, written report on the analysis of research done by the student.

Literature Topical literature.

51VH0012	Electives; theoretical studies	3/2
51VH0021	Electives; practice	4.5/3

The fifth term

The first module

PEDIATRIC NURSING

**7.5 ECTS credits
(5 credits)**

Aims The student

- acquires a basic knowledge of childhood illnesses and hereditary diseases and their effects on a child.
- recognizes the special features in pediatric nursing.
- is able to help and support an ill child and her/his family in critical situations.

Content	51AH0230 Nursing Strategies	1.5/1
	51AH0240 Pediatrics	0.75/0.5
	51AH0250 Treatment of Ear Diseases	0.75/0.5
	51AH0300 Practice in the Pediatric Ward	4.5/3

Teaching Lectures, classroom practice, study visits, independent studies, clinical practice.

Assessment Written tests / assignments, clinical practice.

Literature Topical literature.

The second module

**MATERNITY AND GYNAECOLOGICAL NURSING 6.75 ECTS credits
(4.5 credits)**

Aims The student

- gets a basic knowledge of the most common gynaecological diseases, their symptoms, examinations, treatments and prevention.
- understands the special features of gynaecological nursing and is able to take care of a patient.
- deepens her/his knowledge of maternity nursing and acquires the readiness to support families with a disabled child.

Content	51AH0260	Nursing Strategies	1.5/1
	51AH0270	Gynaecology	0.75/0.5
	51AH0300	Practice in the Maternity / Gynaecological Ward	4.5/3
Teaching	Lectures, classroom practice, independent studies, clinical practice.		

Assessment Written test / assignment, clinical practice.

Literature Topical literature.

The third module

PSYCHIATRIC NURSING

9 ECTS credits

(6 credits)

Aims	The student		
	<ul style="list-style-type: none"> • understands the significance of mental health as a resource for an individual and a community. • is able to consider mental health and mental health disorders holistically. • gets an overall picture of psychiatric helping methods and the psychiatric organisation and service system. • is aware of preventive, caring and rehabilitative psychiatric nursing on the individual and community level. • develops her/his own self-knowledge and understands the significance of counselling. 		

Content	51AH0280	Nursing Strategies	1.5/1
	51AH0290	Psychiatry	0.75/0.5
	51PH0113	Clinical Psychology	0.75/0.5
	51AH0300	Psychiatric Practice	6/4

Teaching Lectures, study visits, independent studies, individual/group assignments, clinical practice.

Assessment Written tests / assignments, practice.

Literature Topical literature.

The fourth module

BACHELOR'S THESIS

3 ECTS credits

(2 credits)

Aims	The student		
	<ul style="list-style-type: none"> • deepens her/his scientific thinking and understands the significance of nursing research in the development of nursing practice, education and administration • knows the stages of qualitative research and the alternative solutions made during the research process. • can use the statistical programme (SPSS) when analyzing the data. 		

Content	51OH0021	Nursing Research	1.5/1
	51AH0022	Statistics	1.5/1

Teaching Lectures, seminars, independent studies.

Assessment Practical and written test, assignment, active participating in teaching.

Literature Topical literature.

51VH0013 Electives; theoretical studies 3/2

ALTERNATIVE ADVANCED STUDIES 42 ECTS credits (28 credits)

MEDICAL- SURGICAL NURSING

The sixth term

The first module

NURSING METHODS 6.75/4.5

Aims The student

- deepens and extends her/his knowledge of medical-surgical nursing, integrating the knowledge base of other sciences.
- understands the significance of cultural values in nursing.

Content	51SH0010	Holistic Medical-Surgical Nursing	3/2
	51SH0030	Ethics	0.75/0.5
	51AH0410	Surgery	1.5/1
	51AH0400	Internal Medicine	1.5/1

Teaching Lectures, seminars, individual assignments, classroom practice, clinical practice.

Assessment Written or practical tests, assignments, active participating in teaching, clinical practice.

Literature Topical literature.

The second module

CRITICALLY ILL PATIENT 3/2

Aims The student

- becomes acquainted with the methods of helping critically ill patients of different ages.
- is able to guide, advise and support patients and their families both in an accident and emergency department and in an outpatient department.

Content	51SH000	Special Features and Helping Methods	1.5/1
	51SH0420	Clinical Psychology	0.75/0.5
	51AH0430	Anatomy and Physiology	0.75/0.5

Teaching Lectures, independent work, seminars, classroom practice, clinical practice.

Assessment Written tests, active participating in teaching, clinical practice.

Literature Topical literature.

51OH0050 PRACTICE **10.5/7**

BACHELOR'S THESIS **4.5/3**

Aims The student

- becomes familiar with scientific writing.
- is able to utilise guidance in different ways during the process of his/her bachelor's thesis.
- understands the significance of nursing research from the point of view of the development of nursing.

Content

51OH0031	Scientific Writing	0.75/0.5
51OH0032	Research Plan	0.75/0.5
51OH0033	Independent Work (guidance available)	3/2

Teaching Lectures, seminars, independent work.

Assessment Active participating in lectures, presentation of research plan.

Literature Topical literature.

51VH0014 Electives; theoretical studies **3/2**

51VH0022 Electives; practice **1.5/1**

The seventh term

The first module

NURSING EXPERTISE AND ADMINISTRATION **7.5/5**

Aims The student

- forms an overall picture of her/his profession and adopts a positive approach to nursing development.
- is able to plan, carry out, develop and evaluate the nursing process holistically.
- know, what economic activity in health care means
- is willing to develop herself/himself and her/his profession.
- get an overall picture of nursing administration and understands that administrative activity is a part of a patient's holistic care.

Content

51AH0440	Nursing Administration and Work Management	2.25/1.5
51SH0060	Nursing Expertise	3/2
51AH0450	Health Care Economics and Entrepreneurship	0.75/0.5
51AH0460	Counselling and Consultation	1.5/1

Teaching Lectures, independent work, seminars, clinical practice.

Assessment Written tests, active participation in teaching, clinical practice.

Literature Topical literature.

The second module
NURSING IN INTERNATIONAL CONTEXT **3.75 /2.5**

Aims The student

- is able to carry out nursing in an international context as well in Finland as abroad.

Content	51SY0020 Multicultural Nursing	0.75/0.5
	51PH0052 Swedish	1.5/1
	51PH0062 English	1.5/1

Teaching Lectures, exercises, workshops, independent assignments.

Assessment Written and oral tests, independent assignments.

Literature Topical literature.

51SH0070 PRACTICE **10.5/7**

BACHELOR´S THESIS **6/4**

Aims The student

- is able to work persistently.
- evaluates her/his own and others´ work with criticism.
- is capable of reporting on her/his bachelor´s thesis in a presentational diagram or in an article.

Content	51OH0041 Independent Work (guidance available)	4.5/3
	51OH0042 Seminars	0.75/0.5
	51OH0043 Proficiency Test	1.5/1

Teaching Independent working, seminars.

Assessment Grade for the bachelor´s thesis, proficiency test.

51VH0015	Electives; theoretical studies	3/2
51VH0022	Electives; practise	1.5/1

PERIOPERATIVE NURSING
The sixth term

The first module
PERIOPERATIVE NURSING **5.25/3.5**

Aims The student

- deepens her/his knowledge of asepsis and prevention of infections.
- is able to safely use the nursing and observation equipments needed.
- is capable of reporting as well orally as in written form and has mastered the use of ADP.
- extends her/his knowledge of surgical and anaesthesiological nursing and is prepared to react to sudden changes in patients´ needs.

Content	51SH0100	Nursing Strategies	2.25/1.5
	51AH0500	Hospital Hygiene and Asepsis	1.5/1
	51AH0510	Surgery	0.75/0.5
	51AH0520	Anaesthesiology	0.75/0.5

Teaching Lectures, classroom practice, independent studies, seminars, study visits, clinical practice.

Assessment Tests, assignment, active participating in seminars, clinical practice.

Literature Topical literature.

**The second module
CRITICALLY ILL PATIENT 4.5/3**

- Aim** The student
- acquaints him/herself with the immediate medical care of patients with acute illnesses or patients who have met with an accident.
 - is able to cope with unexpected situations and knows her/his duties under unusual conditions.
 - learns to deal with a patient both in an accident and emergency department and in an outpatient department and acquaints him/herself with the nursing methods in use.
 - acquaints him/herself with the nursing methods and nursing technology in intensive care.
 - forms an overall picture of the nursing process in intensive care and learns to nurse critically ill patients.
 - understands the importance of the support of an intensive care patient and her/his family and helps them in crises situations.
 - knows the special demands for asepsis in intensive care.

Content	51SH0120	Immediate Medical Care	0.75/0.5
	51SH0130	Outpatient Treatment	0.75/0.5
	51SH0140	Intensive Care	1.5/1
	51AH0530	Anatomy and Physiology	0.75/0.5
	51AH0540	Clinical Psychology	0.75/0.5

Teaching Lectures, classroom practice, independent assignment, clinical practice.

Assessment Written/practical tests, independent assignment, clinical practice.

Literature Topical literature.

51SH0150	PRACTICE	10.5/7
51OH0030	BACHELOR'S THESIS	4.5/3

- Aims** The student
- becomes familiar with scientific writing.
 - is able to utilise guidance in different ways during the process of writing the bachelor's thesis.

- understands the significance of nursing research from the point of view of the development of nursing.

Content	51OH0031 Scientific Writing	0.75/0.5
	51OH0032 Research Plan	0.75/0.5
	51OH0033 Independent Work (guidance available)	3/2

Teaching Lectures, seminars, independent work.

Assessment Active participating in teaching, presentation of research plan.

Literature Topical literature.

51VH0014	Electives; theoretical studies	3/2
51VH0022	Electives; practice	1.5/1

The seventh term

The first module

NURSING DEVELOPMENT AND ADMINISTRATION IN PERIOPERATIVE NURSING

7.5/5

Aims

The student

- becomes more competent to assess, plan, deliver and evaluate perioperative nursing taking into account patients' / their families' needs and the crucial nursing principles.
- is aware of the principles of pain therapy and has mastered the helping methods in pain therapy.
- develops her/his readiness to work in a multi-professional team and develops self-evaluation in perioperative nursing.
- is aware of the health and social care organisation in Finland.
- is able to participate in the development of the staff and work unit.

Content	51AH0550 Administration and Work Management	2.25/1.5
	51SH0160 Expertise in Perioperative Nursing	3/2
	51AH0560 Health Care Economics and Entrepreneurship	0.75/0.5
	51AH0570 Councelling and Consultation	1.5/1

Teaching Lectures, independent working, seminars, study visits, clinical practice.

Assessment Tests, independent assignment, active participating in seminars, clinical practice.

Literature Topical literature.

The second module

NURSING IN INTERNATIONAL CONTEXT

3.75/2.5

Aims

The student

- is able to carry out nursing in an international context as well in Finland as abroad.

Content	51SY0020	Multicultural Nursing	0.75/0.5
	51PH0052	Swedish	1.5/1
	51PH0062	English	1.5/1

Teaching Lectures, independent assignments, workshops.

Assessment Written and oral tests, assignments.

Literature Topical literature.

51SH0170 PRACTICE 10.5/7

BACHELOR'S THESIS 6/4

Aims The student

- is able to work persistently.
- evaluates her/his own and others' work with criticism.
- is capable of reporting on her/his bachelor's thesis in a presentational diagram or in an article.

Content	51OH0041	Independent Work (guidance available)	4.5/3
	51OH0042	Seminars	0.75/0.5
	51OH0043	Proficiency Test	1.5/1

Teaching Independent working, seminars.

Assessment Grade for the bachelor's thesis, proficiency test.

51VH0015 Electives; theoretical studies 3/2
51VH0022 Electives; practice 1.5/1

PSYCHIATRIC NURSING
The sixth term

The first modul
HOLISTIC PSYCHIATRIC NURSING
ON COMMUNITY LEVEL 6.75/4.5

Aims The student

- forms an overall picture of her/his profession, its history and development, theoretical background and ethical questions.
- is able to work as an expert in psychiatric nursing maintaining, promoting and rehabilitating the mental health of people of various ages as well on community level as on family level.

Content	51SH0200	Psychodynamic Helping Methods	3/2
	51AH0600	Psychiatry	3/2
	51SH0210	Ethics	0.75/0.5

Teaching Lectures, study visits, independent working, clinical practice.

Assessment Test/assignment, clinical practice.

Literature Topical literature.

The second module

CLIENT/PATIENT-CENTRED HOLISTIC NURSING 3/2

Aims The student

- masters the nursing methods in mental health care so that she/he is able to carry out systematic, creative and high-quality psychiatric nursing taking into account the psychodynamic nature of the human mind and therapeutic relationship.

Content	51SH0230	Psychodynamic Nurse - Patient Relationship	1.5/1
	51AH0610	Clinical Psychology	0.75/0.5
	51AH0620	Anatomy and Physiology	0.75/0.5

Teaching Lectures, independent working, personal nurse-patient relationship, clinical practice.

Assessment Tests / assignments, clinical practice.

Literature Topical literature.

51SH0240 PRACTICE 10.5/7

BACHELOR'S THESIS 4.5/3

Aims The student

- becomes familiar with scientific writing .
- is able to utilise guidance in different ways during the process of writing of bachelor's thesis.
- understands the significance of nursing research from the point of view of the development of nursing.

Content	51OH0031	Scientific Writing	0.75/0.5
	51OH0032	Research Plan	0.75/0.5
	51OH0033	Independent Work (guidance available)	3/2

Teaching Lectures, seminars, independent work.

Assessment Active participating in lectures, presentation of research plan.

Literature Topical literature.

51VH0014	Electives; theoretical studies	3/2
51VH0022	Electives; practice	1.5/1

The seventh term

The first module

**NURSING DEVELOPMENT AND ADMINISTRATION
IN PSYCHIATRIC NURSING**

7.5/5

Aims The student

- gets a overall picture of nursing administration and understands that the administrative activity is a part of a patient's holistic care.
- knows what economic activity in health care means.
- is aware of the social mission and the future challenges of mental health care and becomes interested in developing mental health services to meet people's needs.

Content	51AH0630 Administration and Work Management	2.25/1.5
	51AH0640 Health Care Economics	0.75/0.5
	51SH0250 Expertise in Psychiatric Nursing	3/2
	51AH0650 Councelling and Consulting	1.5/1

Teaching Lectures, independent assignments, study visits, clinical practice.

Assessment Test / assignment, clinical practice.

Literature Topical literature.

The second module

NURSING IN INTERNATIONAL CONTEXT

3.75/2.5

Aims The student

- is able to carry out nursing in an international context as well in Finland as abroad.

Content	51SY0020 Multicultural Nursing	0.75/0.5
	51PH0052 Swedish	1.5/1
	51PH0062 English	1.5/1

Teaching Lectures, exercises, workshops, independent assignments.

Assessment Written and oral tests and assignments.

Literature Topical literature.

51SH0260 PRACTICE **10.5/7**

BACHELOR'S THESIS

6/4

Aims The student

- is able to work persistently.

- evaluates her/his own and others' work with criticism.
- is capable to report on her/his bachelor's thesis in a presentational diagram or in an article.

Content	51OH0041	Independent Work (guidance available)	4.5/3
	51OH0042	Seminars	0.75/0.5
	51OH0043	Proficiency Test	1.5/1

Teaching Independent working, seminars.

Assessment Grade for the bachelor's thesis, proficiency test.

51VH0015	Electives; theoretical studies	3/2
51VH0022	Electives; practise	1.5/1

HEALTH VISITING

The sixth term

The first module

NINE MONTHS' JOURNEY **4.5/3**

Aims The student

- is able to carry out systematic and goal-directed prenatal nursing and understands the significance of multi-professional teamwork.

Content	51SH0300	Prenatal Nursing	3/2
	51AH0700	Obstetrics	0.75/0.5
	51AH0710	Anatomy and Physiology	0.75/0.5

Teaching Lectures, workshops, classroom practice, independent studies, clinical practice.

Assessment Written/practical tests, assignments, clinical practice.

Literature Topical literature.

The second module

CHILDREN AND ADOLESCENTS **4.5/3**

Aims The student

- becomes acquainted with the systematic, family-orientated and holistic health care and nursing of children and adolescents with emphasis of health promotion, preventive care and early diagnosis.
- knows the factors effecting on childrens' and adolescents' ideas on health.

Content	51SH0310	Pediatric Nursing	1.5/1
	51AH0730	Health care of Children	0.75/0.5
	51AH0720	Health Care of Adolescents	1.5/1
	51AH0740	Clinical Psychology	0.75/0.5

Teaching Lectures, seminars, workshops, independent studies, clinical practice.

Assessment Written tests, assignments, clinical practice.

Literature Topical literature.

51SH0330 PRACTICE 10.5/7

51OH0030 BACHELOR'S THESIS 4.5/3

Aims The student

- becomes familiar with scientific writing.
- is able to utilise guidance in different ways during the process of writing the bachelor's thesis.
- understands the significance of nursing research from the nursing development's point of view.

Content 51OH0031 Scientific Writing 0.75/0.5

51OH0032 Research Plan 0.75/0.5

51OH0033 Independent Work (guidance available) 3/2

Teaching Lectures, seminars, independent work.

Assessment Active participating in lectures, presentation of research plan.

Literature Topical literature.

51VH0014 Electives; theoretical studies 3/2

51VH0022 Electives; practice 1.5/1

The seventh term

The first module

ADULTS 3.75/2.5

Aims The student

- knows the crucial areas of emphasis in occupational health care and its role in the health care of adults.
- delivers occupational health care fixed by law.
- is aware of the most common occupational diseases.

Content 51SH0340 Health Care of Adults 3/2

51AH0750 Occupational Diseases 0.75/0.5

Teaching Lectures, workshops, independent studies, clinical practice.

Assessment Test, assignment, clinical practice.

Literature Topical literature.

**The second module
HEALTH CARE OF OLDER ADULTS
AND DISTRICT NURSING**

1.5/1

Aims The student

- is able to support older adults to maintain the quality of life and to keep up the activities of life.
- is capable of carrying out the high-quality holistic care of clients in public health care and district nursing as a member of a multi-professional team.
- get becomes with the work of public health nurse in health care of older adults and in home care.

Content 51AH0760 The Health Care of Older Adults 0.75/0.5
51AH0770 District Nursing 0.75/0.5

Teaching Lectures, seminars, classroom practice, independent studies, clinical practice.

Assessment Written test or assignment, clinical practice.

Literature Topical literature.

**The third module
DEVELOPMENT OF PUBLIC HEALTH CARE**

3/2

Aims The student

- forms an overall picture of the work of a public health nurse.
- wants to develop public health care.
- is responsible for developing herself/himself and her/his professional skills on the national and international level.

Content 51AH0780 Administration and Work Management 1.5/1
51AH0790 Health Care Economics and Entrepreneurship 0.75/0.5
51AH0795 Counselling 0.75/0.5

Teaching Lectures, seminars, independent studies, clinical practice.

Assessment Written tests, active participating in teaching, clinical practice.

Literature Topical literature.

**The fourth module
NURSING IN INTERNATONAL CONTEXT**

3.75/2.5

Aims The student

- is able to carry out nursing in an international context as well in Finland as abroad.

Content 51SY0020 Multicultural Nursing 0.75/0.5
51PH0052 Swedish 1.5/1
51PH0062 English 1.5/1

Teaching Lectures, exercises, workshops, independent assignments.

Assessment Written and oral tests and assignments.

Literature Topical literature.

51SH0350 PRACTICE **10.5/7**

BACHELOR´S THESIS **6/4**

Aims The student

- is able to work persistently.
- evaluates her/his own and others´ work with criticism.
- is capable of reporting on her/his bachelor´s thesis in a presentational diagram or in an article.

Content 51OH0041 Independent Work (guidance available) 4.5/3
51OH0042 Seminars 0.75/0.5
51OH0043 Proficiency Test 1.5/1

Teaching Independent working, seminars.

Assessment Grade for the bachelor´s thesis, proficiency test.

51VH0015 Electives; theoretical studies **3/2**

51VH0022 Electives; practice **1.5/1**

TOTAL 210 ECTS CREDITS/140 FINNISH CREDITS



Degree Programme in Social Education and Social Care

The training programme produces professionals in the social and health fields with a polytechnical degree. The scope of the studies is 210 credits according to the ECTS standard. These studies take place during a period of 3.5 years. The student may continue his/her studies after this period for one year without any special application. The language of instruction is Finnish.

The training within the social field aims at a professional expertise that includes:

- A flexible and broad know-how with an ability to develop the social field and one's own work.
- Skills pertaining to client work.
- Functional and management skills in the working community.
- Developing and research proficiency.

The training programme prepares experts in the social field for client work and social services as well as other development services to society. These experts will be employed by the public administration, by various communities, by organisations and by the private sector.

The training programme consists of the following main elements:

- Basic studies (55.5 ECTS credits/37 credits).
- Professional studies (139.5 ECTS credits/93 credits).
- Elective studies (15 ECTS credits/10 credits.)

The training programme offers the students a chance to either get broadly acquainted with the various working areas of the social field, or, according to their choice, deepen their knowledge in some special-area of the field. The studies emphasise initiative, self-monitoring and cooperation skills essential to the present-day professional needs. There is also cooperation, through various projects, with the actual working life in the region. With the guidance of their tutors and teachers, students make their choices of studies while reaching for a professional competence that matches their own goals, capabilities and interests.

Capabilities for 'learning to learn' as well as abilities for self-evaluation and the evaluation of one's work are considered basic skills in the ever-changing working conditions of the social field. In addition to performing one's work, the training programme stresses the developing of the social field itself as well as viewing the work and the working community/organisation from the point of view of management and leadership.

If you intend to study the whole degree programme in Kemi-Tornio Polytechnic, please note that the education programme follows the Finnish national common application deadlines which vary from year to year. Please inquire at the education unit for details of this year's deadlines. The application forms can be obtained from the education unit.

Note: all the information given here is preliminary and should be checked by the education unit.

Degree Programme in Social Education and Social Care										
Code	Course	1st year		2nd year		3rd year		4th year		Total ECTS
		ECTS		ECTS		ECTS		ECTS		
		autumn	spring	autumn	spring	autumn	spring	autumn	spring	
411000	BASIC STUDIES									55,5
411100	Orientation for Polytechnical Studies									
411110	Studying in the Polytechnic	1,5								
411120	Learning how to learn	1,5								
411200	Languages and Communication									
411210	Finnish language and communication	1,5	1,5							
411220	Swedish language			1,5	1,5					
411230	First foreign language	1,5	1,5							
411240	Information technology	1,5			1,5					
411300	Humanity and Society									
411310	Philosophy	3,0								
411320	Psychology, social psychology, education, and interaction skills	4,5								
411330	Sociology and social policy	4,5								
411340	An exploration into humanity, nature and the environment	1,5		3,0						
411400	Professional Activity in the Social Field									
411410	Fundamentals of professional activity in social care and the social field	3,0								
411420	Client work in the social field	6,0								
411500	Practical Studies									
411510	Practical training		13,5							
411520	Professional analysis		1,5							
412000	PROFESSIONAL STUDIES									139,5
412100	Research									
412110	Fundamentals of research activity				1,5	3,0				
412120	Bachelor's thesis						6,0	9,0		
412200	Human Growth and Development									
412210	Life span		4,5							
412220	Diversity in life span		6,0							
412300	Organizational Activity and Management									
412310	Activity of the working community				4,5					
412320	Organizational structure and norms regulating the activity				3,0					
412330	Management and development of the organization				3,0	3,0				
412400	Practical Studies									
412410	Practical training					13,5				
412420	Professional analysis					1,5				
412500	Change and Service Development									
412510	The crisis of the welfare state			3,0						
412520	Developing services						4,5			
412530	The future of society and work							3,0		
412600	Theory of Practice of Professional Activity in Social Work									
412610	The "social" in outlining the professional activity of the field			1,5						
412620	The content and methods of professional activity		1,5	3,0						
412630	Professional ethics						1,5			
412700	Special Areas in the Social Field									
412710	Working with children and youth			3,0						
412720	Working with the aged			3,0						
412730	Working with the disabled and rehabilitation			3,0						
412740	Community and basic security work			3,0						
412750	Mental health and crisis work				3,0					
412760	Multicultural work				3,0					
412770	Working with intoxicant abusers				3,0					
412800	Specializing Professional Studies					9,0	15,0	3,0		
412810	Working with children and youth									
412820	Working with the aged									
412830	Working with the disabled and rehabilitation									
412840	Community and basic security work									
412850	Mental health and crisis work									
412860	Multicultural work									
412870	Working with intoxicant abusers									
412900	Practical Studies									
412910	Practical training							13,5		
412920	Professional analysis							1,5		
413000	ELECTIVE STUDIES			6,0	6,0		3,0			15,0
Total ECTS credits		30,0	30,0	30,0	30,0	30,0	30,0	30,0	0,0	210,0

411000	BASIC STUDIES 55.5 ECTS CREDITS (37 credits)	
Aims	The aim of basic studies is to enhance learning abilities, to instill the idea of self monitoring and explorative learning, and to orient the participant towards the social field by studying and analysing oneself as a human being, and the human being as a social actor.	
411100	Orientation for Polytechnical Studies 3 ECTS credits (2 Finnish credits)	
Aims	Orientation for polytechnical studies, the training programme and the social field; the student is acquainted with the self-monitoring mode of studying and learns goal-oriented working as well as independent and cooperative modes of working.	
Content	411110 Studying in the polytechnic	1.5 ECTS credits (1 credits)
	411120 Learning how to learn	1.5 ECTS credits (1 credits)
Teaching	Contact teaching, group work, independent work; keeping a learning diary.	
Assessment	Passed/failed.	
Literature	As agreed between student and teacher.	
411200	Languages and Communication	12 ECTS credits (8 credits)
Aims	The polytechnical language and communication studies build up and support learning capabilities and are an essential element of the professional competence; study periods are integrated and expanded into other studies; later, during the elective studies, it is possible to further develop and deepen the language and communication studies.	
Content	411210 Finnish language and communication	3 ECTS credits (2 credits)
	411220 Swedish language	3 ECTS credits (2 credits)
	411230 First foreign language	3 ECTS credits (2 credits)
	411240 Information technology	3 ECTS credits (2 credits)
Teaching	Contact teaching, independent work; exams, tasks.	
Assessment	1-5.	
Literature	As agreed between student and teacher.	
411300	Humanity and Society	16.5 ECTS credits (11 credits)
Aims	The student becomes aware that the social field is based on the levels of the individual, the community, and the society, and acknowledges the connections between these levels; the student learns the basic concepts in the fields of philosophy, psychology, social psychology, education, sociology, social policy, nutrition and health care; the student becomes acquainted with the way these fields approach and view reality, and learns to see how human activity can be viewed through different sciences.	

Content	411310 Philosophy	3 ECTS credits (2 credits)
	411320 Psychology, social psychology, education, and interaction skills	4.5 ECTS credits (3 credits)
	411330 Sociology and social policy	4.5 ECTS credits(3 credits)
	411340 An exploration into humanity, nature and the environment	3 ECTS credits (2 credits)

Teaching Contact teaching, activity in small groups, independent work; exams, tasks.

Assessment 1-5.

Literature As agreed between student and teacher.

411400 Professional Activity in the Social Field 9 ECTS credits (6 credits)

Aims The student forms a basic conception of the tasks of social and health care and of the contents of professional activity in the social field, as well as developing basic skills for client work.

Content	411410 Fundamentals of professional activity in social care and the social field	3 ECTS credits (2 credits)
	411420 Client work in the social field	6 ECTS credits (4 credits)

Teaching Contact teaching, exercises, independent work; exams, tasks.

Assessment 1-5.

Preceding studies: Sociology and social policy.

411500 Practical Studies 15 ECTS credits(10 credits)

Aims Getting acquainted with the professional activity of the social field; practising basic professional skills in client work; connecting professional skills with the theoretical knowledge of the field; evaluating one's own professional growth.

Content	411510 Practical training	13.5 ECTS credits(9 credits)
	411520 Professional analysis	1.5 ECTS credits (1 credits)

Teaching Practical working experience in a working unit in the social field or in a working project doing client work; an essay in a scientific format.

Assessment 1-5.

Literature As agreed between student and teacher.

Preceding studies: Passing the module Professional Activity in Social Field.

412000 PROFESSIONAL STUDIES 139.5 ECTS CREDITS (93 credits)

Aims The purpose is for the student to explore and evaluate himself/herself, as a professional actor, and communities and social service systems as areas of professional activity within the social field - developing one's way of action and one's work as well as the working communities and services.

412100 Research 19.5 ECTS credits (13 credits)

Aims To acquire skills needed for writing a scientific essay; to learn acquisition of data and processing it through relevant methods; producing knowledge with the use of scientific methods; undertaking a personal thesis on a current issue/phenomenon in the social field -- the thesis must be reported in a written form and can also include audiovisual elements; developing general know-how of the research process.

Content 412110 Fundamentals of research activity **4.5 ECTS credits (3 credits)**
412120 Bachelor's thesis **15 ECTS credits (10 credits)**

Teaching Contact teaching, exercises, independent work; exams, quantitative and qualitative research on a topic within the social field.

Assessment 1-5 (the research product and the research process).

Literature As agreed between student and teacher.

412200 Human Growth and Development 10.5 ECTS credits (7 credits)

Aims The student understands human growth and development as a single process of lifespan; the student learns about the physical, psychological and social aspects of growth in different ages, and learns to recognize the essential features of development in order to be able to work with people of different ages; the student gets acquainted with diversity/difference as part of growth and development, learns the laws of growth and development, and is capable of supporting individual growth in his/her work.

Content 412210 Life span **4.5 ECTS credits (3 credits)**
412220 Diversity in life span **6 ECTS credits (4 credits)**

Teaching Contact teaching, exercises, independent work; exams, tasks, project work.

Assessment 1-5.

Literature As agreed between student and teacher.

412300 Organisational Activity and Management 13.5 ECTS credits(9 credits)

Aims

- The student expands his/her expertise in the social field from the individual approach of client work into working communities and organisations, recognising the societal connections of the various approaches within the

professional field.

- The student becomes aware of the factors affecting the activity and management of the working community and organisation, and is capable of evaluating and developing his/her activity as a responsible member and director of the working community.
- The student learns the main forms of organising the work as well as the developing methods of the working community and organisation, and is capable of applying these skills to his/her professional field.
- The student is capable of recognising the special features of the working environment of the organisations within the social field and the needs of the clients, and is able to take them into account while applying his/her knowledge within the working communities of, or as a director in, the social field.

Content	412310 Activity of the working community	4.5 ECTS credits (3 credits)
	412320 Organisational structure and norms regulating the activity	3 ECTS credits (2 credits)
	412330 Management and development of the organisation	6 ECTS credits (4 credits)

Teaching Contact teaching, exercises, independent work; exams, tasks.

Assessment 1-5.

Literature As agreed between student and teacher.

412400 Practical Studies **15 ECTS credits (10 credits)**

Aims The student deepens his/her professional skills by becoming acquainted practically, or through a work project, with the activity of a working community and organisation as well as management work and tasks; the student evaluates, on the basis of the studies and the working experience, his/her own professional skills and, as a member and director of the organisation, the working ability of the organisation and management.

Content	412410 Practical training	13.5 ECTS credits (9 credits)
	412420 Professional Analysis	1.5 ECTS credits (1 credits)

Assessment 1-5.

Literature As agreed between student and teacher.

Preceding studies: Activity of the working community, fundamentals of management.

412500 Change and Service Development **10.5 ECTS credits (7 credits)**

Aims To study the economic, political, cultural and social predicament of Finnish society, especially as a welfare state, to analyse the service system and its activity, and to find grounds and means for the development of the services; to anticipate the future

of Finnish society and work in a globalizing development; to develop spiritual, informational and skill capabilities for facing change.

Content	412510 The crisis of the welfare state	3 ECTS credits (2 credits)
	412520 Developing services	4.5 ECTS credits (3 credits)
	412530 The future of society and work	3 ECTS credits (2 credits)

Teaching Contact teaching, exercises, independent work; exams, tasks.

Assessment 1-5.

Literature As agreed between student and teacher.

412600 Theory and Practice of Professional Activity in Social Work **7.5 ECTS credits (5 credits)**

Aims The student further analyses the characteristics of professional activity and skills within the social field by deepening his/her understanding of the meaning of 'social', both conceptually and practically; the student deepens his/her expertise in the content of professional activity in the social field within the special areas of social work and social pedagogy; the student understands the methodical approach of the social field and learns the main methods; the student develops his/her professional reflectivity by personally meditating on the relationship between the professional theory and practice and by grasping the professional ethics as part of his/her activity.

Content	412610 The 'social' in outlining the professional activity of the field	1.5 ECTS credits (1 credits)
	412620 The content and methods of professional activity	4.5 ECTS credits (3 credits)
	412630 Professional ethics	1.5 ECTS credits (1 credits)

Teaching Contact teaching, exercises, independent work; exams, tasks.

Assessment 1-5.

Literature As agreed between student and teacher.

412700 Special Areas in the Social Field **21 ECTS credits (14 credits)**

Aims To get acquainted with the various working areas of the social field.

Content	412710 Working with children and youth	3 ECTS credits (2credits)
	412720 Working with the aged	3 ECTS credits (2 credits)
	412730 Working with the disabled and rehabilitation	3 ECTS credits (2 credits)
	412740 Community and basic security work	3 ECTS credits (2 credits)
	412750 Mental health and crisis work	3 ECTS credits (2 credits)
	412760 Multicultural work	3 ECTS credits (2 credits)
	412770 Working with intoxicant abusers	3 ECTS credits (2 credits)

Teaching Contact teaching, independent work; exams, tasks.

Assessment 1-5.

Literature As agreed between student and teacher.

Preceding studies: Human growth and development, professional activity in social work.

412800 Specialising Professional Studies 18+9 ECTS credits (12+6 credits)

After the compulsory professional studies (14 credits) the student chooses one of the four specialising options: working with children and youth, working with the aged, working with the disabled and rehabilitation, community and basic security work; of one of these the student will complete a total of 12 credits; in addition to these main specialising studies, the student can choose 6 credits to be completed either in (a) one of these three: mental health and crisis work, multicultural work, working with intoxicant abusers (b) those courses within the optional studies that the student considers being supportive of his/her professional objectives.

Content	412810 Working with children and youth	18 ECTS credits (12 credits)
	412820 Working with the aged	18 ECTS credits (12 credits)
	412830 Working with the disabled and rehabilitation	18 ECTS credits (12 credits)
	412840 Community and basic security work	18 ECTS credits (12 credits)

	412850 Mental health and crisis work	9 ECTS credits (6 credits)
	412860 Multicultural work	9 ECTS credits (6 credits)
	412870 Working with intoxicant abusers	9 ECTS credits (6 credits)

412810 Working with Children and Youth 18 ECTS credits (12 credits)

Aims

- The student understands the position of the child, the young person and families with children within the Finnish culture and society.
- The student understands the prerequisites of the balanced development of the child and his/her own role in promoting it as well as in preventing problems.
- The student is well acquainted with various educational trends for early and special education and especially with the methods of guiding education and special education.
- The student has acquired abilities to examine and develop his/her educational thought and consciousness, is capable of applying his/her knowledge and skills in practical educational situations, and reviewing and developing working practices.
- The student is well-acquainted with preemptive child protection work, understands the risks and problems associated with the jeopardization of the child's development and those factors in the family and the society that cause and sustain the problems.
- The student is acquainted with the goals, principles and aiding methods of child protection.

Content	412811 Fundamentals of early education	2.25 ECTS credits(1.5 credits)
	412812 Guiding education	1.5 ECTS credits (1 credits)

412813 Special education	2.25 ECTS credits(1.5 credits)
412814 Alternative pedagogical approaches	1.5 ECTS credits (1 credits)
412815 Children's and youth culture	3 ECTS credits (2 credits)
412816 Child protection	4.5 ECTS credits (3 credits)
412817 Special questions pertaining to working with children and young people	3 ECTS credits (2 credits)

Teaching Contact teaching, visits, expert to sites, expert visits, independent work; exams, tasks, projects.

Assessment 1-5.

Literature As agreed between student and teacher.

Preceding studies: 412710 Working with children and the youth, 3 ECTS credits (2 credits).

412820 Working with the Aged 18 ECTS credits (12 credits)

Aims

- The student learns about aging as a societal, social and individual phenomenon.
- The student learns the various forms and service systems of working with the aged.
- The student receives information about the most common health problems and medication associated with aging.
- The student gets acquainted with the planning, coordination, development and management of services for the aged.
- The student gets acquainted with the special issues regarding working with the aged: mental work, treatment of a dying patient, social problems associated with aging.
- The student gets familiarised with voluntary work for the aged and activities for stimulating the aged.

Content	412821 Research and policy concerning the aged	3 ECTS credits (2 credits)
	412822 Special questions pertaining to geriatrics	3 ECTS credits (2 credits)
	412823 Special questions pertaining to working with the aged	6 ECTS credits (4 credits)
	412824 Developing the work with the aged	6 ECTS credits (4 credits)

Teaching Contact teaching, visits to sites, expert visits, independent work; exams, tasks, projects.

Assessment 1-5.

Literature As agreed between student and teacher.

Preceding studies: 412720 Working with the aged, 3 ECTS credits (2 credits)

412830 Working with the Disabled and Rehabilitation 18 ECTS credits (12 credits)

Aims

- The student improves his/her understanding of disability viewed in the lifespan of the individual, from the point of view of families and immediate communities, and as reflected in the structures of the society; the student deepens his/her view of disability and develops his skills to support the resources of the disabled and their families/immediate communities (networks) for coping with the daily life; the student works on his/her attitudes, views and feelings as part of professional growth and working skills with the disabled.
- The student acquires capabilities for psychosocial rehabilitation work in order to be able to work as part of a multiprofessional working team; in particular, the student develops his/her counselling and guiding skills.
- The student gets acquainted with individualised rehabilitation work, especially with the family and immediate community (network) approaches, and acquires capabilities to work in different types of small communities of the disabled; the student is capable of taking, in his/her action, into consideration the special challenges caused by various types of disabilities, and is capable of developing and making more versatile the working methods he/she has learned.

Content	412831 Rehabilitation methods	6 ECTS credits (4 credits)
	412832 Supporting the growth of disabled children and youth	3 ECTS credits (2 credits)
	412833 Health care of the disabled	1.5 ECTS credits (1 credits)
	412834 Basic care of the seriously disabled	1.5 ECTS credits (1 credits)
	412835 Mental problems and other special questions pertaining to the mentally disabled	1.5 ECTS credits (1 credits)
	412836 Developing the work with the disabled	4.5 ECTS credits (3 credits)

Teaching Contact teaching, visits to sites, expert visits, independent work; exams, tasks, projects.

Assessment 1-5.

Literature As agreed between student and teacher.

Preceding studies: Human growth and development, 10.5 ECTS credits (7 credits),
412730 Working with the disabled and rehabilitation, 3 ECTS credits (2 credits).

412840 Community and Basic Security Work 18 ECTS credits (12 credits)

Aims

- The student broadens the conceptual basis of his/her professional skills by learning about relationships and problems of work, livelihood and social participation and the social and individual change agents behind these.
- The student conceptualises the new challenges raised by the new predicament of society and opportunities, to promote the resources of communities and individuals in the areas of employment, livelihood and social

participation.

- The student acquires functional and methodical skills to work with communities and individuals in their own working and social environment.

Content	412841 Changes in living habits and social problems	3 ECTS credits (2 credits)
	412842 New opportunities for communities	3 ECTS credits (2 credits)
	412843 Basic security	3 ECTS credits (2 credits)
	412844 Methods of social work and social pedagogy in enhancing the resources of the individual and the communities	4.5 ECTS credits (3 credits)
	412845 Developing community and basic security work	4.5 ECTS credits (3 credits)

Teaching Contact teaching, exercises, independent work; exams, tasks, projects.

Assessment 1-5.

Literature As agreed between student and teacher.

Preceding studies: 412740 Community and basic security work, 3 ECTS credits (2 credits).

412850 Mental Health and Crisis Work **9 ECTS credits (6 credits)**

Aims Capabilities to undertake mental health and crisis work; an ability to use the most common psychosocial working methods in guiding, counselling and supporting the client and his/her immediate community (network).

Content	412851 Preventive mental health work	3 ECTS credits (2 credits)
	412852 Treatment-oriented mental health work	1.5 ECTS credits (1 credits)
	412853 Rehabilitative mental health work	4.5 ECTS credits (3 credits)

Teaching Contact teaching, visits to sites, expert visits, independent work; exams, tasks, projects.

Assessment 1-5.

Literature As agreed between student and teacher.

Preceding studies: 412750 Mental health and crisis work, 3 ECTS credits (2 credits).

412860 Multicultural Work **9 ECTS credits (6 credits)**

Aims Intellectual, attitudinal and practical ability to encounter, in one's work, representatives of different cultures, and an ability to understand the significance of cultural factors in interpreting human activity.

Content	412861 Cross-cultural interaction	3 ECTS credits (2 credits)
	412862 Immigrants as an element of Finnish society	

		1.5 ECTS credits (1 credits)
	412863 Multicultural work in the social field	4.5 ECTS credits (3 credits)
Teaching	Contact teaching, visits to sites, expert visits, independent work; exams, tasks, projects.	
Assessment	1-5.	
Literature	As agreed between student and teacher.	
	Preceding studies: 412760 Multicultural work, 3 ECTS credits (2 credits).	
413870	Working with Substance Abuse	9 ECTS credits (6 credits)
Aims	Capability to undertake intoxicant and narcotics work; an ability to use the most common psychosocial working methods in guiding, counselling and supporting the client and his/her immediate community (network).	
Content	412871 How does substance addiction develop?	1.5 ECTS credits (1 credits)
	412872 Diverse treatment ideologies and services; rehabilitation and the law	3 ECTS credits (2 credits)
	412873 Narcotic/intoxicant problems within the family	3 ECTS credits (2 credits)
	412874 Youth and substance abuse	1.5 ECTS credits (1 credits)
Teaching	Contact teaching, visits to sites, expert visits, independent work; exams, tasks, projects.	
Assessment	1-5.	
Literature	As agreed between student and teacher.	
	Preceding studies: 412770 Working with intoxicant abusers, 3 ECTS credits (2 credits).	
412900	Practical Studies	15 ECTS credits (10 credits)
Aims	The methodical and substantial deepening and evaluation of professional skills on the basis of practical working experience towards the end of the studies.	
Content	412910 Practical training	13.5 ECTS credits (9 credits)
	412920 Professional analysis	1.5 ECTS credits (1 credits)
Teaching	Working in a working unit in the social field or in a working project doing tasks that deepen the professional skills of the student; an essay in a scientific format.	
Assessment	1-5.	
Literature	As agreed between student and teacher.	

Preceding studies: Specialising professional studies.

413000 ELECTIVE STUDIES 15 ECTS CREDITS (10 credits)

During the elective studies, the student can develop his/her expertise according to needs as well as interest. The student may choose elective studies both from the courses of the Unit of Social Education and Social Care and from the shared courses of the polytechnic. Elective courses are updated annually.

DEGREE PROGRAMME IN CULTURAL AND MEDIA STUDIES

Bachelor of Visual and Media Arts

Art and Media training is intended to produce qualified media experts (in TV, radio and multimedia) and visual artists (in media art, 2D graphics, animation, 3D, photography, multimedia and Web art). Upon graduation, media students qualify for the following professions: editor, Web artist, videographer, stage manager, TV cameraman, sound engineer, music producer, cinematographer, production manager, media graphics designer, TV lighting cameraman, director or assistant director, media designer etc. Education in visual artistry aims at providing skills and knowledge needed in visual professions, as well as in technical or artistic tasks involved in producing images with the use of the latest and most advanced information technology.

The degree programmes of Media and Visual Arts are organised every year in five eight-week-long periods so that the final amount of credits is 240 ECTS credits/160 credits. The duration of the studies is 4 years. The degree programmes comprise the following main elements: Basic Studies, Professional Studies, Advanced Studies, Elective Studies according to the students' choices and interests, Practical Training and Bachelor's Thesis. Several times the study groups are mixed and they also vary in size according to the aims of the particular training. The unit also annually offers some continuation studies in audiovisual journalism, animation, media management and other applied subjects.

Much emphasis is put on the practical and expressional skills and knowledge of arts and media. Methods vary from lessons to exercises, trips to examinations. Required reading consists partly of English and Swedish books. Groupwork is also an essential factor in production-based training which itself requires good social skills. Assessments are usually carried out differently for each course. The bachelor's thesis is an independent study based on a research plan approved by the unit. Additionally, one must also present an audiovisual product connected thematically with the thesis. Tutoring is organised by the lecturers.

In addition to the general admission requirements, the unit arranges an aptitude test, and an interview for the domestic applicants. Foreign students are asked to send their 1. Foreign Student application (special form) 2. Previous work (which has been requested) 3. Curriculum vitae and 4. Possible recommendations. For further details, contact the unit coordinator.

If you intend to study the whole degree programme in Kemi-Tornio Polytechnic, please note that the education programme follows the Finnish national common application deadlines which vary from year to year. Please inquire at the education unit for details of this year's deadlines. The application forms can be obtained from the education unit.

Degree Programme in Media Studies

	Credits	ECTS credits
Introduction to polytechnic studies	16	24
• Orientation studies	2	
• Changing Society, work life and qualifications	2	
• Computer science and ADP	3	
• Organisations, interaction and group dynamics	(2) (Combined with professional studies)	
• Research and Philosophical Study of Humanity and Culture studies	(2)(Combined with professional and thesis work)	
• Communication and interaction		
Finnish	3	
Swedish	3	
English	3	
 Basic studies	 24	 36
• Basics for audiovisual working	8	
• Entrepreneurship, regulations and ethics	8	
• Radio-, TV- and New Media production project	8	
 Professional studies	 32	 48
• TV works	8	
• Radio works	8	
• Media contents and contexts	8	
• Electronic publishing	8	
 Advanced studies (40+12+20) (International workpackages included)	 72	 108
• Media screenwriting	40	
General	8	
Commercial	8	
Documentary	8	
Fiction (radio)	8	
Motion picture	8	
Internet	8	
Multimedia	8	
Multivision	8	
• Media production (technically oriented)	40	
Sound	8	
Image and lighting	8	
Arctic work	8	
Documentary	8	
Film language	8	
Commercial	8	
Music	8	
Variety	8	
Radio I	8	
Radio II	8	

TV I	8	
TV II	8	
• Media producing, marketing and financing	40	
Budgeting and schedules	8	
Media research	8	
Private and public community	8	
Motion picture/video	8	
Sound and music	8	
Graphics	8	
Multimedia	8	
Commercials (radio, TV, Net)	8	
Bachelor's thesis	12	18
Practical training	20	30
Elective studies (including other institutions)	16	24

Course unit information

Introduction to polytechnic studies encompasses basic studies, professional studies and advanced studies. Special emphasis is put on the students' ability to develop planning for work over a period of time and to keep systematic records of these plans, the ability to evaluate one's own work and getting into appropriate cultural and social activities in the school environment. The scope of courses is also targeted to the geographic, cultural and social aspects of the Kemi-Tornio Region, Barents Region and international partnership areas.

Basic studies include an introduction to the theory and practice of audiovisual expression, technology, working concepts, legal and financial aspects of production and media ethics.

Professional studies offer the main core of general radio, TV and multimedia work and theory. During this period the students' own interest areas are formulated and they decide about their further educational alternatives.

Advanced studies are divided into three optional course areas: media screenwriting, media production and media design for varied target groups. Studies in these thematic units require artistic talent and technological competence. The media products should be in themselves positive expressions of the student's values, social and environmental issues and personal commitment.

The exact starting point of an individual study course is known approximately six months beforehand. Teaching methods vary from lectures and exercises to essays and required reading of about 30 books. The institution also offers special courses in working under arctic conditions, underwater filming and regional cultural events.

Degree Programme in Visual Arts

	Credits	ECTS credits
Introduction to Polytechnic studies	20	30
• Orientation studies	2	
• Changing society, working life and qualifications	2	
• Computer science and ADP	3	
• Organisations, interaction and group dynamics	2	
• Research and philosophical study of humanity and culture	2	
• Communication and interaction	9	
Finnish	3	
Swedish	3	
English	3	
Basic studies	25	38
• Foundations of visual arts		
• Foundations of composition and image making		
• Foundations of media		
Professional studies	38	57
• Pattern, form and space		
• Drawing and painting		
• Multimedia		
• Animation		
• Graphics		
• Art history, modern art and genres		
• Research in the arts		
Advanced studies	3	48
• 2D graphics		
• 3D presentation		
• Animation		
• Multimedia		
• Art and Net		
• Time, space and conceptual art		
• Photography and image processing		
Bachelor's thesis and research	10	15
Practical training	20	30
Elective studies	15	22

Course unit information

The main objectives of the basic studies are to familiarise the student with methods of working and thinking in artistic pursuits. The courses include drawing, colour theory, composition theory, photography, applied graphics, figure drawing and plastic works. The students will be given an overview of computer-based work with images, sound, lights and the Web. The students will be introduced to exhibitions and other cultural events.

The professional studies will deepen the framework and scope of visual arts and computer graphics. The analytical skills concerning the production and reception of art are promoted. Additionally, the principles of animation are studied.

During the advanced study stage the students will be offered an extensive combination of theoretical information and practical studies to develop their personal abilities and expertise in a chosen area of artistic production: 2D, 3D, animation, photography and image processing, multimedia, Web art and time-space art.

Teaching methods include lectures, exercises, required reading and exhibitions. Usually art excursions are made to the Atlantic coast and neighbouring areas.

The exact starting point of an individual study course is known approximately six months beforehand. Many courses of the institution are arranged in English due to the foreign teachers who come from Britain, Canada, United States, Sweden, the Netherlands and Russia. This also includes those courses during the summertime, i.e. the international courses of audiovisual business administration and experimental media with the University of Lapland.

8. NON-DEGREE PROGRAMMES

GATEWAY EDUCATION

The Unit of Technical Education in Kemi prepares technological experts for both domestic and international assignments. The unit is situated in the Technology Park among research laboratories, hi-tech companies and innovative SMEs. The number of students in engineering is about 800.

Gateway education is given in English and it will orientate you towards working and doing business in a multicultural environment. The education is aimed at students and professionals from other European countries, Russia and Finland. Qualification is a minimum of two years of study at college or a polytechnic-level institution and a good command of the English language. Accommodation is arranged by the unit.

Gateway prepares you to work in a multicultural environment; studying and running project work in an international group is your Gateway between cultures and nationalities. It is also your Gateway to Northern Europe. The programme gives you know-how in international trade, logistics and in working in a multicultural environment. You can also take courses from the degree programmes taught in English in engineering, business, data processing or health care or do the final thesis of your own institution with the guidance of our teachers.

The programme consists of:

Supporting studies: Computer Studies, Marketing (1st to 15th February).

Working in cross-cultural environment: Meetings and negotiations, teamwork, organisation development.

Languages: Finnish, English.

International business studies: Foreign trade, international economics, entrepreneurship, logistics.

Excursions to the North Calotte Area, expert lectures, project.

Methods: Lectures, written exams, reports, excursions, project.

Application deadline: 1st November 1999.

Credits: 20 credits / 30 ECTS.

Fees: None in Finland.

The application forms can be obtained from the education unit.

Contact: Mr. Raimo Pyyny

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Organisation Development

3 ECTS credits (2 Finnish credits)

Content

Leading in various kinds of organisations.
Group and team leadership.
Learning organisation.
Development discussions.
Developing and researching work: organisation visions, mission, aims and goals.
Organisation communication.
Problem-solving in leading and development.

Teaching Lectures and assignments which include a personal report on working and leading a working group and team.

Assessment Written test.
Participation in classroom work.

Teamwork

1.5 ECTS credits (1 credits)

Content

Differences between teams and working groups.
Team basics: size, skills, approach, accountability and commitment to common purpose and performance goals.
Teamwork skill requirements.
Communication skills, observing, listening, nonverbal communication.
Problem-solving discussion in a team.
Team performance development.
Leading a team.

Assessment Participation in classroom activities.

Intrapreneurship and International Organisations

1.5 ECTS credits (1 credits)

Aims To familiarize the student to the idea and meaning, means and possibilities of intrapreneurship in general and also in international organisations.

Content Background for the course, the essence of entrepreneurship (the meaning and purpose of entrepreneurship, cultural differences in entrepreneurship), the essence of intrapreneurship (the meaning and purpose of intrapreneurship, characteristics of an intrapreneur), the means for developing intrapreneurship in firms (empowering people, teamwork, other means possible), intrapreneurship in practice (examples from international firms).

Literature Will be announced later.

Assessment Assignments and research report.

Meetings and Negotiations

1.5 ECTS credits (1 credits)

Content Negotiations

Examines the strategic and tactical issues of how to prepare and conduct negotiations. Special focus on the fundamental negotiating techniques including communication skills; body language, listening skills, the use of props, analyzing your opponent's strengths and weaknesses, as well as your own, and how to negotiate to win.

Meetings

Directed towards the goal of improving your skills in conducting meetings so as to ensure full and effective participation. Special focus on how to prepare for meetings, take minutes, chair meetings, qualities of a minute taker, leadership qualities, listening skills, tips on dealing with difficult people, handling tough situations and making meetings more interesting.

Assessment Final Examination.

Finnish and Living in Finland

1.5 ECTS credits (1 credits)

Content Basic facts on Finland and Finnish.
Finland - a part of Europe, education system, industry, products from Finland, culture
Social policy and health care.
Phrases in social situations: greetings, introductions, etc.

Assessment

Written and oral test.
Participation in classroom work.

Foreign Trade

4.5 ECTS credits (3 credits)

Content Facts about Finland's foreign trade.
Reasons for going international.
Forms of internationalisation.
Foreign trade documents.
Terms of delivery.
Terms of payment.

Assessment Written test (open books).

International Economics

1.5 ECTS credits (1 credits)

Content Project work (3 students in a group) includes:
Written paper (10-15 pages).
Oral presentation (30 minutes).

Topics of the Project Work

Finland - the Political and Economic Situation.
The European Monetary Union.
Unemployment in Europe - A Permanent Problem ?
Enlargement of the European Union.
Asian Crisis and its Impact on Northern European Countries.
Russia in Transition.
Trade Between Eastern European and the European Union.

Assessment Written test.
Oral presentation.
Teamwork skills.

Logistics

4.5 ECTS credits (3 credits)

Content

- Forces of change in the role of logistics and purchasing.
- Framework of logistics.
- Purchasing process.
- Achieving an integrated supply chain.
- Identification of core business and outsourcing strategy.
- Levels in purchasing; vendor management, supply chain management and relationship management.
- Purchase portfolio.
- Inventory control and ABC analysis.
- Transport mode selection.
- Logistics and competitive strategy.
- Economic geography and structure of Barents region & North Calotte & Finland.
- Explanation of logistic exercise.
- Border crossing between east and west.
- Railroad transportation.
- Water transportation.
- Road transportation.
- Air transportation and energy.
- Telecommunication.
- Environmental aspects.
- City transportation.
- Exporting Finland.
 - Lines of business which service Northern Europe in Finland.
- Gateway Finland.
 - Transit traffic in Finland.
 - Finland as a marketing centre of Northern Europe.

Assessment Assignments.
Written tests.
Final exam.

Computer Studies, optional

1.5 ECTS credits (1credits)

Content Word processing.
Spreadsheets.
Information searching and retrieval.
Communication via e-mail, Usenet News and IRC.

Assessment Test with computer.
Assignments with computer.

Marketing, optional

1.5 ECTS credits (1 credits)

Content The Contents and purpose of marketing.
Products, services and benefits.
The marketing environment.
The competitive environment.
Buyer behaviour.
Customers and market segmentation.
Product offering.

Assessment Exercises.
Written test.

English in English, optional

3 ECTS credits (1.5 credits)

Content Communication skills, written and oral.
English language as a business tool and cultural bridge.
Developmental skills exercises for students of English as a second language.
Vocabulary development and comprehension.

Teaching Lectures
Additional out-of-class assignments (grammar worksheets, essays, corporate communication skills exercises).
2hr final exam.

Assignments
• Classroom assignments and communication exercises.

Assessment Students are assessed based on their willingness to participate in classroom activities, attendance and overall enthusiasm; completion of homework, assignments, while actual progress is determined by students' individual levels of achievement and ability.

Finnish in English, optional**3 ECTS credits (1.5 credits)**

Content	The Finnish way of life. Characteristics of the Finnish language. Phrases in social situations. Service encounters; shopping, eating out, banking. Communication; travelling, speaking on the phone. Grammar; present tense, past tense, the most used cases, questions and answers, singular and plural in the Finnish language.
Assessment	Written test. Participation in classroom work.

EURO-ARCTIC TOURISM

The Unit of Management and Commerce in Kemi offers an English-speaking programme in tourism for international and Finnish students. The aim of the programme is to highlight the special features of arctic tourism in Finland, Sweden, Norway and Russia. It will provide students with the background knowledge and skills required in the international tourism business.

The studies consist of an introduction to the arctic region with geographical, economic and cultural aspects, the utilization of information technology in the tourism business and the characteristics of arctic tourism as well as its marketing and development.

Kemi lies on the Gulf of Bothnia and offers excellent surroundings for arctic tourism. It is a popular winter destination with the world's largest snowcastle, the world's only icebreaker organising tours for tourists and enterprises offering husky and snowmobile safaris. Other popular activities are snowboarding, cross-country skiing and swimming.

Time: 6 September - 10 December 1999.

Applications: The application forms can be obtained from the education unit and must be submitted by 11 June 1999 at the latest.

Credits: 20 credit units/30 ECTS.

Fees: Education is free of charge.

Aims

On completion of the course, students

- have acquired a thorough knowledge of the arctic regions and arctic tourism
- are able to work independently and in international groups
- are able to assess and develop tourism in any special region
- are able to utilise information technology in tourism development
- have increased their competence in dealing with Scandinavian and Russian businesses and clients.

Outline

The course is divided into five modules. The first module provides the student with the necessary skills in information technology required in tourism studies and in working in the trade. The second module deals with the arctic region in general, with its geographical, economic, environmental and cultural aspects. At the third stage the main focus is on the concept of arctic tourism with all its implications. The fourth module concentrates on tourism development and on utilising IT in selling and marketing economically profitable tourism products. The last module consists of the student's independent work, putting into practice the theory and skills acquired in the previous modules.

1. INFORMATION TECHNOLOGY

6 ECTS credits (4 Finnish credits)

Aims To give students a basic understanding of and skills in information technology use in studies and the tourism business. To enable the students to use Internet as a tool in business.

Content Desktop tools: Word processing, spreadsheets and presentation applications. Network services and Internet: use of e-mail and World Wide Web; information search, information providing systems, electronic business in the tourism sector: Internet marketing, reservation systems.

Teaching Lectures 64 hours.
Assignments 96 hours.

Assessment Continous assessment and assignment 50 %, test in computing skills 50 %

Literature Will be submitted during the lessons.

2. INTRODUCTION TO THE ARCTIC REGION

3 ECTS credits (2 credits)

Aims The student acquires a thorough knowledge of the Euro-Arctic Region and realises it as a coherent and cooperative economic area. S/he becomes aware of the cultural differences between the Scandinavian countries and Russia. Special attention is paid to the present situation in north-western Russia.

Content Geographical and Demographic Features.
Present Economy in Northern Scandinavia and North-Western Russia.
Environmental Issues.
Scandinavian and Russian Cultures.

Teaching Lectures 32 hours.
Assignments 48 hours.

Assessment Examination 60 % and assignments 40 %.

3. EURO-ARCTIC TOURISM

9 ECTS credits (6 credits)

Aims The student learns what the arctic region has to offer to tourists, what potential Lapland and north-western Russia have in tourism and how far they have advanced in developing it.

Content Arctic Attractions.
Seasons and Attainability.
Tourism Industry in the Arctic Region.
Tourism Organisations.
Activities.

Sustainable Tourism.
Sami Culture and Other Cultural Attractions.
The Extreme Ends: Finnish Lapland and North-Western Russia.

Teaching Lectures 96 hours.
Assignments 144 hours.

Assessment Examination 60 % and assignments 40 %.

4. TOURISM DEVELOPMENT

9 ECTS credits (6 credits)

Aims The student is able to create tourism products and develop them as well as to market and sell tourism services with the help of advanced information technology. The student is aware of the vital role of profitability in tourism development. He or she is capable of working in various development projects in the arctic region or in corresponding areas.

Content Market Research.
Product and Service Development.
Destination Management.
Profitability.
Electronic Business in the Tourism Sector: Internet Marketing, Reservation Systems.

Teaching Lectures 96 hours.
Assignments 144 hours.

Assessment Assignments 100 %.

5. INDEPENDENT WORK

3 ECTS credits (2 credits)

Aims The student becomes familiar with independent work based on the theoretical background and assignments in the previous modules. S/he may choose the theme of the work according to her/his own professional interests and wishes.

Assessment Includes self-evaluation.

9. GENERAL PRACTICAL INFORMATION

Before leaving your country

ECTS/ERASMUS students must get certain documents before they leave their home country:

1. Form of identification/passport.
2. Document certifying Erasmus student status and grant allowance (home institution).
3. A letter of acceptance (will be sent to you by the host institution).
4. 2 photographs.
5. Medical information and form (E111).
6. The transcript of records from the home institution.

Arrival in Finland and the Kemi-Tornio region

Helsinki-Vantaa Airport is an international airport with good connections to all the European capitals and, beyond, to the US and Asia. There are good domestic connections. From all Finnish airports there is an airport bus service or local minibuss to the centre of the local town and of course taxis are also available.

It is also possible to arrive by sea, from Sweden, Germany or Estonia. The main harbour towns are Helsinki and Turku. There are international train links from Moscow and St. Petersburg and from Sweden to northern Finland.

Kemi and Tornio are situated some 700 kilometres to the north of Helsinki. You can take a flight from Helsinki to Kemi and it takes about an hour. It is also possible to take a train from Helsinki to Kemi and it takes about nine hours. You can also arrive via Sweden and take a flight from Stockholm to Luleå which takes about an hour. The overnight train from Stockholm to Luleå is also an alternative. From Luleå to Kemi or Tornio you have to come by bus and it takes about an hour and a half. The cities of Kemi and Tornio are located within 25 kilometres from each other and there are many regular bus connections between the two cities.

Please fax or e-mail, in good time, your arrival date and flight number/train arrival time to the person who is in charge of your degree programme or the International Relations Coordinator (mobile phone +358 40 5316 381). It is recommended that you arrive during the daytime/working hours (8.00 am. to 4.00 pm.). If exchange students arrive between these hours, they will usually be met at the airport or the train station. After arriving, students are guided to the student residences.

Authorisation/identification documents

Passport

Before coming to Finland there are certain preparations you should undertake before leaving your home country. All foreigners except citizens of the Nordic countries need a valid passport. Citizens of the Nordic countries need an official identity card to prove their identity.

Visa

A visa is granted for a trip to Finland lasting for a maximum of three months or for a comparable short-term stay. A visa has to be applied for before departure to Finland in the country where the applicant permanently resides. Very seldom are visas granted or extended in Finland. Depending on your nationality and the length of your stay in Finland, you will require a visa or a residence permit. Students from the Nordic countries and students from EU/EEA (= European Economic Area = EU countries and Iceland, Liechtenstein and Norway) countries do not need visas at all. About 80 countries have concluded an agreement with Finland abolishing the visa requirements: check at your local Finnish embassy or legation whether your country is among these.

Students from countries outside the EU/EEA or outside the other visa-free countries who intend to stay in Finland for less than three months have to apply for a visa before arrival to Finland at the Finnish embassy or consulate in the country where the applicant permanently resides. To be issued a visa, the student should demonstrate that s/he has means to cover the living expenses, which means about FIM 200/ Euro 34 per day, while studying in Finland. The price of the visa is FIM 180/Euro 30.

Residence permit

Foreigners must fulfil certain criteria in order to obtain a residence permit for study in Finland. You must

- (in most cases) be at least 18 years old.
- intend to become a full-time student at an institution of higher education or a secondary vocational school.
- show proof that you have been accepted as a full-time student at such an institution.
- show that your application indicates the estimated length of studies and the final degree of your studies.

Students coming from the Nordic countries do not need residence permits. Students coming from EU/EEA countries need to apply for a residence permit if they intend to stay for more than three months. The residence permits for students coming from EU/EEA countries are granted by the local police in Finland. The guarantee money is not required from citizens of the EU and EEA countries. However, they must demonstrate that they have means to cover the living expenses while studying in Finland.

Students from countries outside the EU/EEA who intend to stay in Finland for more than three months must apply for a residence permit before arrival to Finland at the Finnish embassy or consulate in the country where the applicant permanently resides. If a non-EU resident arrives in Finland without the necessary residence permit, it is not usually possible to issue it in Finland. If you have come to Finland with a visa to take an entrance examination, and you pass this examination, you will be eligible for a residence permit for one academic year at a time. In this case you can apply for a residence permit from local police authorities in Finland. Foreign students from countries outside the EU/EEA countries are required to demonstrate that they have sufficient funds by depositing the sum of FIM 30 000/Euro 5046, with no conditions restricting the use of this account. A new deposit is required at the beginning of each academic year.

The price of the residence permit is FIM 130/ Euro 22 if you are a student. The fee must be paid also in the event that the visa or residence permit is not granted. And please note that it must be paid in advance!

Work permit

Students who are citizens of EU/EEA countries or participate in EU education need no work permits and they are allowed to work without restrictions. Other international students are allowed to do paid work for a maximum of twenty hours a week during the semesters and full-time during the vacations. You will need a special permit if you intend to work more than this during the semesters. A work permit can be obtained from the Finnish embassy in your country or a consulate/legation abroad or in Finland from the local police authorities.

Civil registration

If you wish to stay in Finland more than a month, you have to submit an official notification of change of residence, the Notice of Moving, to a local register office within one week after your arrival. Notice should then be given every time you move within the country or away from it. The notification should be made within one week before or at the latest one week after moving. The forms for the Notice of Moving are available at post offices, register offices and police offices. If you move from another Nordic country, you must present an Inter-Nordic Migration Form. Citizens of the Nordic countries do not need to report at the Register Office.

Basic information (name, address, nationality and date of birth) on people residing in Finland is recorded in the Population Information System. On the basis of the registration, a foreigner is given the Finnish personal identity number. If you reside in Finland for at least one year, you must be registered in the Population Information System. In case you wish to stay for a shorter period of time it is possible to ask for registration to get the personal identity number. However, no municipality of residence is registered for you in Finland and therefore you do not necessarily have the same rights as persons who reside in Finland permanently. The Finnish personal identity number is used for identification purposes in many situations such as in banks, hospitals and libraries. The registration takes place in a local Register Office which in most cities is located at the main police station.

Accommodation

For ECTS/ERASMUS students, the polytechnic aims to arrange accommodation. International students who are not a part of any exchange program have to arrange accommodation on their own. The polytechnic does not have dormitories of its own. Students can apply for a student flat to "Tornion Oppilasasuntola Oy" or "Kemin Opiskelija-asuntosäätiö" (the Tornio Student Apartment Administration Company and the Kemi Student Dormitory Foundation respectively). Also the cities of Kemi and Tornio and the private sector provide flats which are rented out to students. Contact information is provided in attachment.

In Tornio the student housing is located within a 500m radius of the polytechnic. You are provided with a single room and will share kitchen, bathroom and shower with two students. The flats are furnished. You will have to bring your own bed-linen except a mattress. In the kitchen there are no cooking utensils. You also have access to laundry facilities. The rent is FIM 850/ Euro 143 per month. If you want to you can share the room with another student and then the rent is FIM 500/Euro 84 person/month. Electricity, heating and water are included in the rent. Students have to pay a deposit one month's rent which returned when leaving if there are no claims.

In Kemi the student housing is located both in the city center and within a 2.5km radius of the educational units. You are provided with a single room and will share kitchen, bathroom and

shower with two students. The flats for single persons are furnished but so-called family apartments are unfurnished. When it comes to other equipment and laundry facilities the information given above on student housing in Tornio is also valid for Kemi. The rent is about FIM 850 – 1250 (Euro 143 - 210). Electricity, heating and water are included in the rent. The deposit is FIM 800 (Euro 134).

The Unit of Health Care and Nursing and The Unit of Social Care provide a few well-equipped and reasonably-priced flats for their visiting students and teachers. In the event that you rent a flat from the private sector prepare to pay higher rent. In the private sector a deposit is usually one or two month's rent which is returned when leaving if there are no claims.

When you fill in the application for Foreign Students and Socrates/Erasmus Student Exchange Programme, you are also asked about the need for accommodation and asked to fill in the special application for accommodation. Both applications, for Student Exchange Programme and accommodation, must be sent at the same time to the International Relations Officer.

Health care and insurance

The level of health care in Finland is high. There are two parallel systems: the public one financed by the government and municipalities, and the private sector. Both sectors are available but the private services are more expensive to the patient. There are public health-care centres and hospitals throughout the country.

Citizens of the EU/EEA countries are covered by the National Health Insurance plan administrated by the Social Insurance Institution, or KELA (Kansaneläkelaitos). If their stay in Finland lasts for less than one year, they must have the E111 form from their local social security office before arriving in Finland in order to be covered by the plan. If the stay of an EU/EEA citizen lasts for more than a year, s/he must get the E106 or E109 form from the local social security office before arriving in Finland. This form must always be taken to a local KELA office after arriving in Finland.

You need some basic vaccinations: Tet + d, Polio, MPR (Mumps = Parotitis, Measles = Morbilli, German Measles = Rubella). Should you wish to do your practical training here, for example in a hospital, you have to check the required vaccinations and tests from the education unit.

Polytechnic students do not have their own health centres. Every education unit has its own nurse who is available once a week at certain time. You have to check the meeting hours and place from the notice board. In case of serious or acute illness, contact the emergency service in the municipal health care centres and hospitals. An appointment in a health-care centre costs about FIM 50-100 (Euro 8.4- 16.8). In the event of serious illness or injury transportation can be called from the general emergency phone number **112**. In a dental emergency you have to turn to the dental clinic in a local health-care centre.

For your own safety it is advisable to have insurance. You have to check whether your school has insured you during your stay abroad. Otherwise you have to take care of your insurance by yourself. Students coming from outside the EU/EEA countries should pay special attention to their insurance because they are not covered by the National Health Insurance in Finland. Discuss with your individual insurance company what kind of cover would be most beneficial for your stay in Finland. The Centre for International Mobility CIMO and Pohjola Insurance Company

Ltd have signed a cooperation agreement on insurance concerning students, research workers and trainees. For further information contact CIMO (<http://www.cimo.fi>).

Estimated personal expenses per month

Polytechnics do not charge tuition fees. Usually the libraries have a few copies of course literature but sometimes students have to buy the books or pay for other kinds of studying materials. Accommodation expenses are approximately FIM 850 (Euro 143) per month if you live in a student dormitory and FIM 2000 (Euro 336) per month if you rent a flat from the private sector.

Groceries are more expensive in Finland than in many other countries. All education units have a restaurant of their own and lunch there costs about FIM 10 - 12.50. (Euro 1.7 - 2). There are always two lunch alternatives; the other one is vegetarian. Eating out is more expensive. Do not forget to include personal and leisure expenses. The total monthly living expenses of a single student average around FIM 4,000 (Euro 670).

Banking

Travellers' cheques are best. Personal cheques are hardly ever used in Finland. The most common credit cards such as Visa can be used, but make sure that your credit card has an account with money in it before you come. Banks charge approximately FIM 20 (Euro 3.5) for money exchange and it is advisable to limit the number of money exchanges you make. Be sure that you have Finnish money on hand when you arrive in Finland.

After arrival exchange students can open a bank account. Prepare to prove your identity when opening an account. The account is provided with a cash card which you can use to withdraw money from cash machines. You recognise the cash machines from the logo OTTO. You can get banking assistance from student advisors, teachers, the International Relations Officer and banks.

Communication

E-mail and telephone

E-mail is a widely-used way of communicating both internationally and domestically. The polytechnic provides good opportunities for using e-mail. All students are given an e-mail access in exchange for a small fee.

Students have access to coin/card telephones in the polytechnic. There are also coin/card telephones in the student residences. Card telephones are more common nowadays and telephone cards can be bought from, for example, kiosks. Mobile phones are extremely common, also among students.

How to call abroad

Dial the international prefix 990, 999, 994 or 00 (some regional/country phone charges are more favourable depending on the prefix you choose). Then dial the country code, trunk code and the subscriber's number. Note that the first number of the trunk code (often 0) is omitted.

Leisure time facilities

There are several possibilities to take part in sporting activities in the Kemi-Tornio region. In the wintertime the most popular activities are cross-country skiing and downhill skiing, for example slalom. Special activities such as husky and snowmobile safaris are also available and snow provides plenty of opportunities for your creativity. Also ice sports, such as ice hockey and “bandy” (a variant of hockey with a ball instead of a puck) are good outdoor activities. In both towns there are also good facilities for indoor sports such as tennis, squash, bowling, gym etc. Both towns have high-standard swimming halls which are worth a visit.

The Tornio river offers great opportunities for fishing. Other popular hobbies in the summertime are, among other things, sailing and golf. The golf course of Tornio-Haaparanta, Green Zone Golf, is the only course which crosses a border between two states. There are many beaches and during hot summer days it is refreshing to dive into the cool water.

If you prefer cultural experiences, there are museums and beautiful churches in both towns, for example The Aine Art Museum in Tornio and the church of Tornio are worth visiting. The theatre in Kemi has several plays in its repertoire. Both city libraries offer a great book collection to the friends of literature. If you are keen on history there are many monuments to see. Several discotheques, pubs and restaurants provide great opportunities for social gatherings or nightlife.

KETOAKKU – the student body of Kemi-Tornion Polytechnic

KETOAKKU consists of six different student bodies from all units of Kemi-Tornio Polytechnic. It has approximately 400 members. It was founded on 1st January 1996 and registered officially on 23rd of April 1998. The purpose of KETOAKKU is to look after students’ rights in educational and social matters. We also try to make students feel at home while studying in Kemi-Tornio Polytechnic. KETOAKKU arranges several student events during the terms of the academic year. Information about events can be found on the school notice board.

Student bodies from different units of Kemi-Tornio Polytechnic play a very active role in tutoring foreign students. They also arrange various freetime and leisure activities for their students in their own units. For further information feel free to contact the student body in your own unit. For foreign students KETOAKKU arranges a meeting every month. The purpose of those meetings is to introduce Finnish culture to foreign students and vice versa. It is also an excellent opportunity for foreign and Finnish students to get to know each other.

KETOAKKU has its own office on Nahkurinkatu 6, 2nd floor, Kemi. The office is open Mon. - Fri. 8 am. to 4 pm. All students are very welcome to visit there if they have any problems, big or small. The office is also an excellent place to do assignments or just spend time playing games: darts, pinball etc. The office can also be used during the evenings. If you need to use our premises, please contact the office.

For further information please do not hesitate to contact us!

Kemi-Tornio Polytechnic student body KETOAKKKU
Nahkurinkatu 6, 2nd floor
94100 KEMI
Tel +358 16 250 425, fax +358 16 250 426
E-mail: ketoakku@tokem.fi

ATTACHMENTS





KEMI-TORNIO POLYTECHNIC

Director's Office P.O. Box 505 FIN-94101 Kemi Finland
aira.rajamaki@tokem.fi / international.officer@tokem.fi
http://www.tokem.fi

APPLICATION FORM

Socrates/Erasmus Student Exchange Programme

SENDING INSTITUTION

(Please write in block letters)

University and department	
Head of department	
E-mail	Phone and fax
Socrates coordinator	
E-mail	Phone and fax
Signature of departmental Socrates coordinator Date:	
Signature of institutional Socrates coordinator Date:	

STUDENT PERSONAL DATA

Family name		First names	
Nationality	Sex Male <input type="checkbox"/> Female <input type="checkbox"/>	Marital status Single <input type="checkbox"/> Married <input type="checkbox"/>	
Street address	Postal code and country		
Country	E-mail (if available)		
Telephone number (note country code)			
Programme of study and year at sending institution			
Photo			
Indicate level in finished semester <input type="checkbox"/> fair <input type="checkbox"/> good <input type="checkbox"/> excellent			
Languages			
English	<input type="checkbox"/> elementary	<input type="checkbox"/> intermediate	<input type="checkbox"/> advanced
Swedish	<input type="checkbox"/> elementary	<input type="checkbox"/> intermediate	<input type="checkbox"/> advanced
German	<input type="checkbox"/> elementary	<input type="checkbox"/> intermediate	<input type="checkbox"/> advanced
French	<input type="checkbox"/> elementary	<input type="checkbox"/> intermediate	<input type="checkbox"/> advanced
Spanish	<input type="checkbox"/> elementary	<input type="checkbox"/> intermediate	<input type="checkbox"/> advanced
Finnish	<input type="checkbox"/> elementary	<input type="checkbox"/> intermediate	<input type="checkbox"/> advanced
Are you interested in an elementary Finnish course? <input type="checkbox"/> yes <input type="checkbox"/> no			

APPLICATION (please select appropriate category)

Degree Programmes		Period of study	
Euro-Economics Education (Bachelor of Business Administration)	<input type="checkbox"/>	Autumn semester (August-December)	<input type="checkbox"/>
Cross-Border Engineering (Bachelor of Engineering)	<input type="checkbox"/>	Spring semester (January-May)	<input type="checkbox"/>
International Nursing Programme (Bachelor of Nursing)	<input type="checkbox"/>		
International Systems Specialist Education (Bachelor of Business Administration)	<input type="checkbox"/>		
Non-degree programmes		Period of study	
Gateway Education	<input type="checkbox"/>	Spring semester only	<input type="checkbox"/>
Euro-Arctic Tourism Education	<input type="checkbox"/>	Autumn semester only	<input type="checkbox"/>
Arrival date:			
Accommodation should be organised yes <input type="checkbox"/> no <input type="checkbox"/> from to			
(please refer to the special application for accommodation)			

ECTS - LEARNING AGREEMENT

Course unit code (if available)	Course unit title (as indicated in the information package)	Number of ECTS credits

Student's signature

Date: _____

Receiving institution

We confirm that this proposed programme of study/learning agreement is approved.

Departmental Socrates coordinator's signature

Institutional Socrates coordinator's signature

Date: _____

Date: _____

Kemin opiskelija-asunto säätiö
(The Kemi Student Dormitory Foundation)
Tornion oppilajasuntola Oy
(The Tornio Student Apartment Administration)



APPLICATION for accommodation

APPLICANT

(Please write in block letters)

Surname	Nationality	Social security no./Date of birth
First names	Sex Male <input type="checkbox"/> Female <input type="checkbox"/>	Marital status Single <input type="checkbox"/> Married <input type="checkbox"/>

HOME ADDRESS

Street address	Telephone number (note country code)
Postal code and town	Country

HOME INSTITUTION

Name of the home institution	
Street address	Telephone number (note country code)
Postal code and town	Country

GENERAL INFORMATION

Name of the school you have been accepted in	Education programme
Date of arrival	Need for accommodation from to

OTHER EXTRA INFORMATION (what kind of room required, allergies etc.)

Date and Place	Signature
----------------	-----------

**Please enclose the certificate verifying that you are an ERASMUS student,
or that you have been admitted to a Finnish third-level educational institution**

**Please submit the application with the Socrates/Erasmus application
to the International Relations Officer**

WHERE WE ARE



Map of Tornio



Kemi-Tornio Polytechnic
Socrates/Erasmus programmes' cooperation partners
Academic year 1999-2000

Country

Nature of cooperation

The Netherlands

INTERNATIONAL OFFICE
MRS. ANNEMARIE BAKKUM
TEL +31 72 518 3652
FAX +31 72 518 37 32
E-MAIL: int.office@staff.ec.hsa.nl

Business and administration
Student and teacher exchange
Curriculum work

HOGESCHOOL ALKMAAR
POSTBUS 403
1800 AK ALKMAAR
THE NETHERLANDS

STUDENT EXCAHNGE COORDINATOR
MS. PAULINE ZIJLSTRA
TEL. +31 30 230 081 20
FAX +31 30 230 8100
E-MAIL: p.zijlstra@staf.fnt.hvu.nl

Technology/engineering
Student exchange

HOGESCHOOL VAN UTRECHT
FACULTY OF SCIENCE AND ENGINEERING
P.O.BOX 182 (KAATSTRAAT 65)
3500 AD UTRECHT
THE NETHERLANDS

Hungary

MS. KATALIN KOLLATH
MR. GYÖRGY HASKO
TEL +36 1 467 78 11, +36 1 467 78 00 EXT.324
FAX +36 1 407 15 56
E-MAIL: kollathk@kkf.hu
E-MAIL: haskogy@kkf.hu

Business and administration
Student and teacher exchange

KULKERESKEDELMI FÖISKOLA
(COLLEGE FOR MANAGEMENT AND BUSINESS STUDIES)
H-1165 BUDAPEST, DIOSY LAJOS U.22-24

MS. CSILLA SARDI
INTERNATIONAL PROGRAMMES
COORDINATOR
TEL +36 22 312 152, EXT.132
FAX +36 22 312 288

Business and administration
Tourism
Multimedia
Drama pedagogy
Student and teacher exchange

E-MAIL: csilla@mail.kodolanyi.hu / csilla_sardi@hotmail.com
<http://kodolanyi.hu>

KODOLANYI JANOS FÖISKOLA
KODOLANYI JANOS UNIVERSITY COLLEGE
SZEKESFEHERVAR 8000
SZABADSAGHARCOS UT 59.
HUNGARY

MRS. MARIA DUDAS
INSTITUTIONAL COORDINATOR
TEL +36 210 26 51
FAX +36 303 94 25
E-MAIL: dudas@nfs.jozsef.kando.hu

Technology/engineering
Student and teacher exchange

KANDO KALMAN POLYTECHNIC
INSTITUTE OF COMPUTER ENGINEERING
TAVASZMEZO U. 15-17
H – 1084 BUDAPEST

Austria

MS. SABINE PATA
INTERNATIONAL OFFICE
TEL +43 2622 89 0 84 0
FAX +43 2622 89 0 84 99
E-MAIL: pata@fhwn.ac.at

Technology/engineering
Business and administration
Student and teacher exchange

FACHHOCHSCHUL-STUDIENGÄNGE WIENER NEUSTADT
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Technology/engineering
Student and teacher exchange

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Technology/Engineering
Information technology
Multimedia
Student and teacher exchange

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Technology/Engineering
Business and administration
Student and teacher exchange
Curriculum work

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Technology/engineering
Health care
Student and teacher exchange

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Technology/engineering
Health care
Student and teacher exchange

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Business and administration
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Student and teacher exchange

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Technology/engineering
Business and administration
Student and teacher exchange

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Technology/engineering
Student and teacher exchange

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Business and administration
Student and teacher exchange

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Business and administration
Student and teacher exchange

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Student and teacher exchange

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(The Kemi Student Dormitory Foundation)

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TORNION OPPILASASUNTOLA OY

(The Tornio Student Apartment Administration)

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TORNION VUOKRA-ASUNNOT OY

(The Tornio Rental Apartment Administration)

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95400 Tornio, Finland

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KEMIN KAUPUNGIN VUOKRA-ASUNNOT

(Rental apartments of the city of Kemi)

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About health care

GENERAL EMERGENCY NUMBER 112

KEMIN TERVEYSKESKUS

(Health-care centre in Kemi)

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Emergency Medical Service in the central hospital in Kemi

Kauppakatu 25

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TORNION TERVEYSKESKUS

(Health-care centre in Tornio)

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About taxi services

Taxi services in Kemi and Tornio
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About living and studying in Finland

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