



## UNIVERSITY OF TECHNOLOGY AND BUSINESS



LAPPEENRANTA  
UNIVERSITY OF TECHNOLOGY

P.O.Box 20, 53851 LAPPEENRANTA  
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[www.lut.fi](http://www.lut.fi)

## CAMPUS



LAPPEENRANNAN  
TEKNILLINEN YLIOPISTO

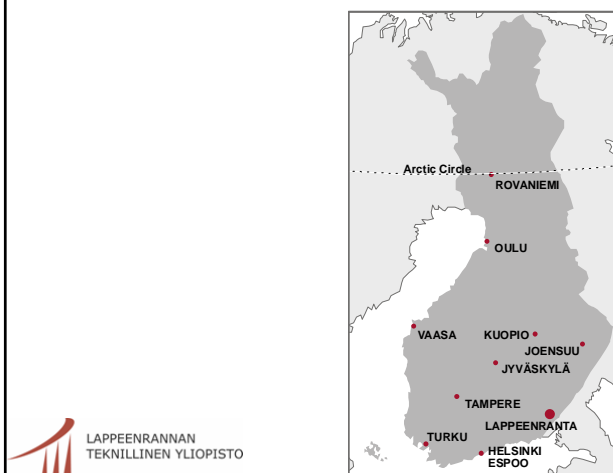
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## MAP OF EUROPE



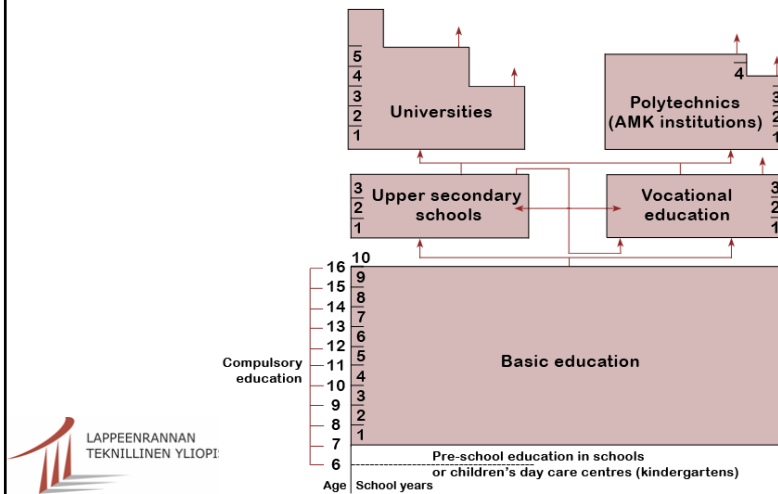
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## MAP OF FINLAND (university cities)



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## Education System of Finland



5/2007

## LAPPEENRANTA UNIVERSITY OF TECHNOLOGY



- University of technology and business
- Founded in 1969
- 900 staff members
- Over 5500 students
- 3000 students in continuing professional education
- 1500 open university students
- Budget 2006
  - Ministry of Education € 34.5 million
  - Others € 27.1 million
- Newest facilities opened in 2004



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## TASKS OF LAPPEENRANTA UNIVERSITY OF TECHNOLOGY

- To provide high-quality, cutting-edge new knowledge, and research results involving technology and business and scientific fields supporting them.
- To train international specialists with a strong ethical foundation and the ability to continuously learn and develop themselves.
- To play a role in the development of South Karelia and all of Eastern Finland by promoting business ventures and the development of enterprises, increasing technical and financial knowledge and creating opportunities for intellectual growth.



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## VALUES OF THE UNIVERSITY

- Ethics
- High quality
- Skinnarila spirit
  - industriousness
  - innovativeness
  - commitment
  - co-operation
  - an encouraging atmosphere
  - openness
  - Karelian cheerfulness and spontaneity



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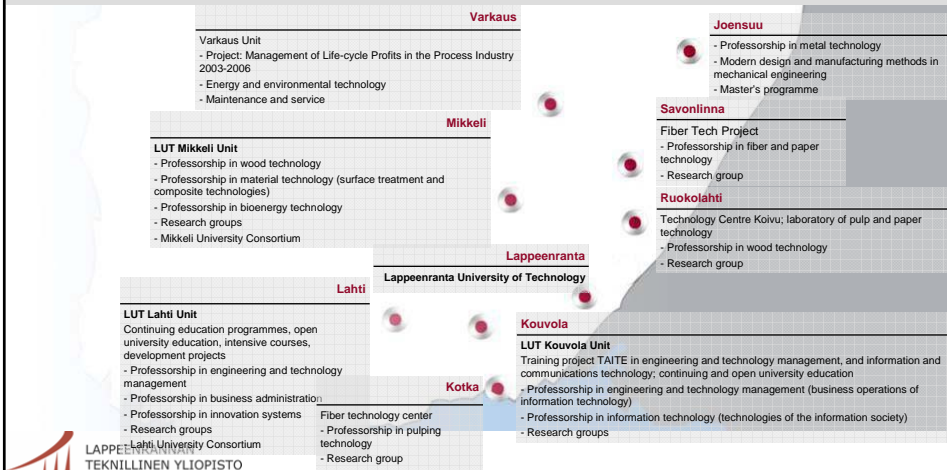
## STRATEGY FOR LIFE-LONG LEARNING

- Full-time degree-oriented undergraduate studies
- Part-time degree-oriented undergraduate studies
- Scientific postgraduate studies
- Continuing professional education
- Cooperation with other educational institutions



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## REGIONAL UNITS



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## CENTRE OF EXCELLENCE OF ACADEMY OF FINLAND

- The Academy of Finland has appointed 23 centres of excellence in research for the years 2006–2011.
- LUT's research group of applied mathematics, headed by Professor **Heikki Haario**, is part of the centre of excellence in inversion problems
- This centre of excellence is a top international research unit and brings together Finnish research groups in the field (LUT, Helsinki University, Kuopio University, Helsinki University of Technology and Oulu University).



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## NORTHERN DIMENSION RESEARCH CENTRE NORDI

- NORDI (Northern Dimension Research Centre) is a research institute founded in 2003 that combines the university's multidisciplinary resources and knowledge in Russian affairs. Its tasks are to:
  - **coordinate the university's studies on Russian affairs** and conduct research together with the university's numerous research groups
  - **produce research results for industry and enterprises** in the fields of economics and technology that support the EU's Northern Dimension
  - **cooperate in research** with international universities, research institutes, industry and government bodies
  - **compile and convey research results** to respond to international, national and regional needs, taking into consideration trade and industry, the public sector and academic institutes
- Core research areas: 1) Russian economy and business, 2) Energy and environment, 3) Natural resources, 4) Information and communications technology, 5) Logistics and transport infrastructure



The geographic focus is on Russia and the Baltic rim states

[www.lut.fi/nordi](http://www.lut.fi/nordi)

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## SOUTH KARELIAN INSTITUTE

- LUT's independent institute founded in 2002
- multidisciplinary research unit focusing on issues involving South Karelia, the border region and the Karelian Isthmus
- specialised in humanities and social sciences, part of national and international networks
- adds to LUT's range of research and training
- supports especially postgraduate studies and research in humanities and social sciences e.g. by providing thesis instruction and training for members of the research community
- supports and participates in South Karelian culture and education projects
- promotes the utilisation and active communication of research results concerning South Karelia



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[www.lut.fi/eki](http://www.lut.fi/eki)



Etelä-Karjala-  
instituutti

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## TECHNOLOGY BUSINESS RESEARCH CENTER (TBRC)

- TBRC is an international research unit that combines technology and business and employs the multidisciplinary resources of the university
- networking is important in order to expand the university's multidisciplinary expertise
- the centre aims for high-level international research
- TBRC also aims to respond to the practical needs of businesses
- TBRC introduces new and innovative approaches to research at LUT
- TBRC supports postgraduate education in faculties



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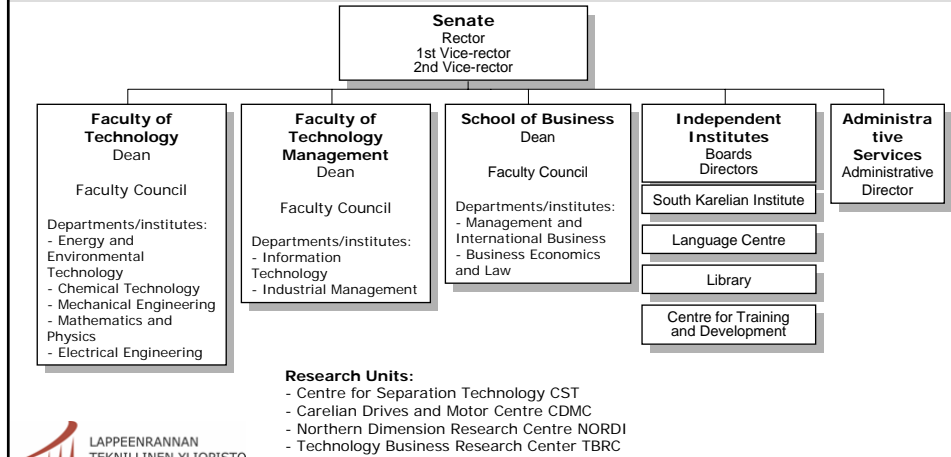
[www.tbrc.fi](http://www.tbrc.fi)



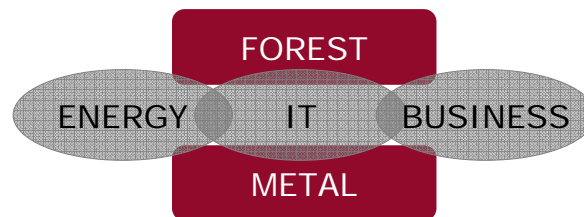
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**TBRC** Technology Business  
Research Center

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## UNIVERSITY ORGANISATION



## AREAS OF STRENGTH AND EMPHASIS





## DEGREE PROGRAMMES

### Technology

- Energy Technology
- Chemical Technology
- Mechanical Engineering
- Electrical Engineering
- Information Technology
- Industrial Engineering and Management
- Environmental Technology



### Major Subjects in Business

- Accounting
- International Marketing
- Business Law
- Strategy Research
- Finance
- Management and Organizations
- Supply Management
- Knowledge Management



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### **Degree Programme in Energy Technology**

prepares students for a career involving electricity and thermal power production, transfer, distribution and consumption, and environmental impacts

### **Degree Programme in Environmental Technology**

knowledge of how to decrease polluting emissions in service and energy production



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### **Degree Programme in Chemical Technology**

prepares students for a career in process and chemical technology  
with knowledge of economic efficiency in environmental protection

### **Degree Programme in Mechanical Engineering**

provides students with top training in machine design and production  
engineering, focusing especially on a career in design and  
production in the metal industry



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### **Degree Programme in Electrical Engineering**

trains professionals with wide-ranging skills in the field of electricity  
and electronics for the rapidly evolving labour market

### **Degree Programme in Information Technology**

provides a competitive education in the field of modern information  
processing methods and industrial applications



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## **Degree Programme in Industrial Engineering and Management**

trains specialists who combine expertise in business and technology

## **Degree Programme in Business Administration**

prepares students for a variety of expert and management tasks in the corporate world



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## **DEGREE PROGRAMME IN TECHNOLOGY ENTREPRENEURSHIP**

- M.Sc. (Tech.) degree in industrial engineering and management, focusing on entrepreneurial studies, good engineering practice and its commercial utilisation
- supplies tools for starting a business or for management and expert positions in SMEs
- students planning to launch a business or already working as entrepreneurs are provided with the best possible tools for thriving in an increasingly competitive and international business environment
- goal: annually 17 graduates with a M.Sc. (Tech.) degree, at least four of which have a business aiming for growth
- targeted for applicants with a polytechnic or university degree
- annual application period February-March



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## INTERNATIONAL TRAINING



### **IBTM**

#### **International Business and Technology Management**

- targeted for international exchange students
- duration one academic year, does not lead to a degree

### **Master's Programmes in English**

- lead to a M.Sc. (Tech.) degree
- duration about two years
- previous studies in the field required

## MASTER'S PROGRAMMES IN ENGLISH

### **Business**

Master's Degree Programme in International Technology and Innovation Management  
(Double degree with St. Petersburg State University, Graduate School of Management)

### **Mechanical Engineering**

Master's Degree Programme in Mechanical Engineering  
Master's Degree Programme in New Packaging Solutions

### **Information Technology**

Master's Degree Programme in Information Technology

### **Chemical Technology**

Chemical and Process Engineering

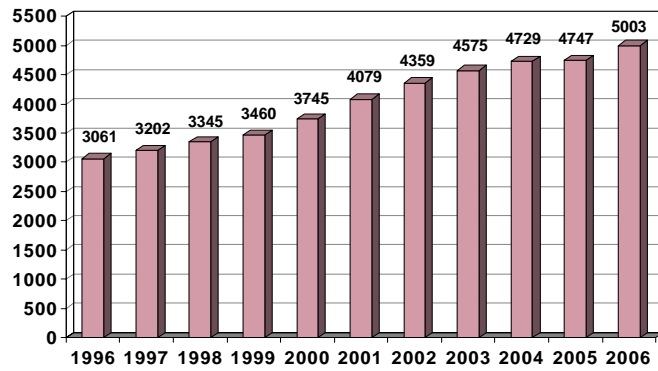
### **Environmental Technology**

Master's Degree Programme in Bioenergy Technology

### **Electrical Engineering**

Master's Degree Programme in Electrical Engineering

## NUMBER OF STUDENTS

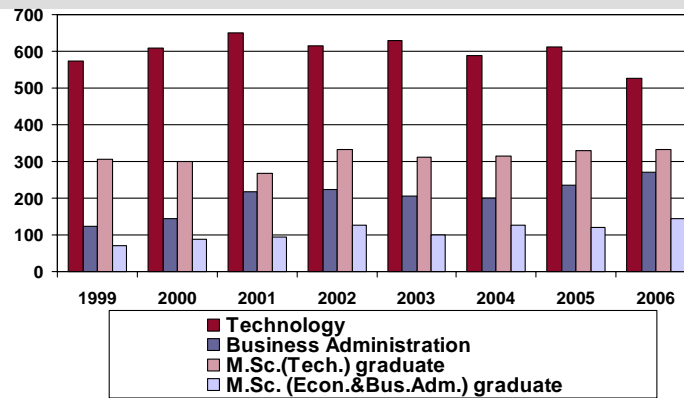


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■ Number of undergraduate students

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## FIRST-YEAR STUDENTS AND GRADUATES



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Average duration of studies 2006:

Business 4.1 years; Technology 4.9 years

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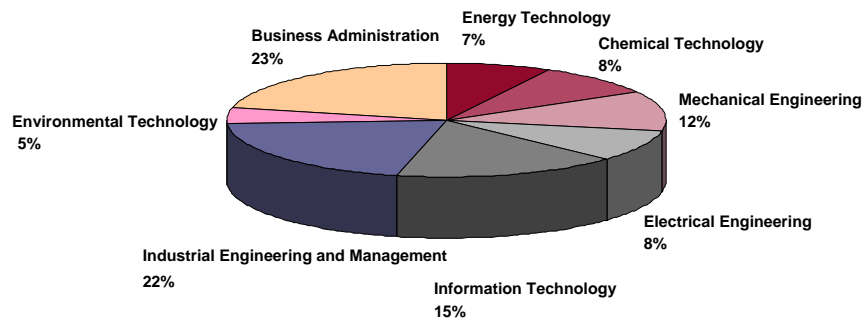
### Undergraduate Students 2 Jan. 2007 (enrolled)

Degree Programme	New Students	All	
		Students	Women
Energy Technology	47	334	15%
Environmental Technology	31	239	65%
Chemical Technology	60	396	36%
Mechanical Engineering	83	587	8%
Electrical Engineering	52	406	10%
Information Technology	37	760	11%
Industrial Engineering	176	1107	27%
Business Administration	162	1174	50%
<b>Total</b>	<b>648</b>	<b>5003</b>	<b>28%</b>



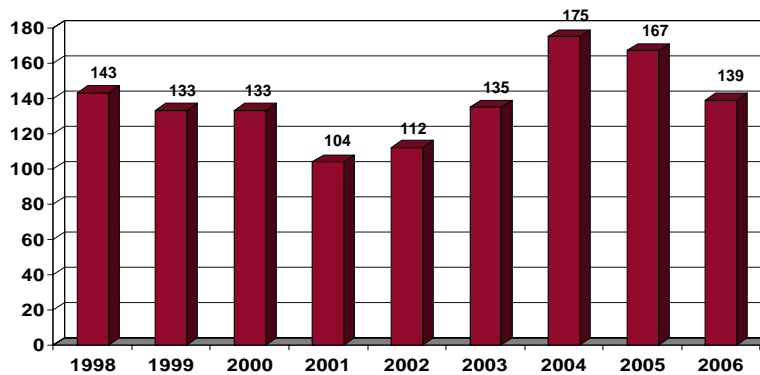
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### M.Sc. Graduates from Degree Programmes 2 Jan. 2007



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## Undergraduate Students Abroad



## Where do students come from? (2006 admission)

### Technology

- South Karelia 16%
- Kymenlaakso 16%
- Etelä-Savo 13%
- Uusimaa 11%
- North Karelia, Päijät-Häme, Pohjois-Savo, Central Finland...

### Business Studies

- Uusimaa 53%
- South Karelia 16%
- Päijät-Häme 7%
- Pirkanmaa 4%
- etc...

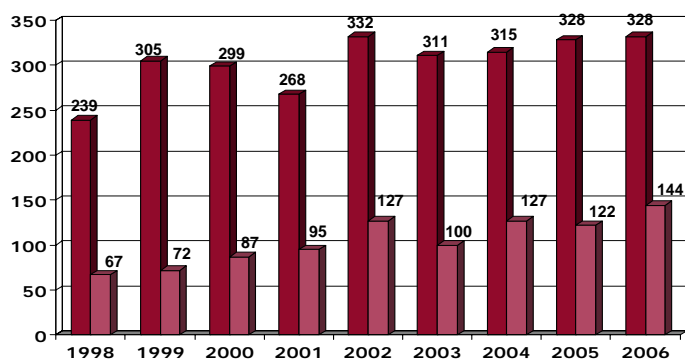
## Postgraduate Students 2 Jan. 2007

Department	Men	Women	Total
Energy Technology	43	12	55
Environmental Technology	12	8	20
Chemical Technology	51	35	86
Mechanical Engineering	57	12	69
Information Technology	33	10	43
Industrial Engineering	62	34	96
Electrical Engineering	47	11	58
Business	45	67	112
<b>Total</b>	<b>350</b>	<b>189</b>	<b>539</b>



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## Graduates with a Master's Degree



■ M.Sc. (Tech.), 2 Jan. 2007 total: 5832 ■ M.Sc. (Econ. & Bus. Adm.), 2 Jan. 2007 total: 1044



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## M.Sc. (Tech.) Degrees

Department	2 Jan. 2007	%	In 2006
Energy and Environmental Technology	1279	22	49
Chemical Technology	899	15	34
Mechanical Engineering	1023	18	46
Information Technology	626	11	67
IEM	1861	32	98
Electrical Engineering	144	2	38
<b>Total</b>	<b>5832</b>	<b>100</b>	<b>332</b>

## M.Sc. (Econ. & Bus.Admin.) Degrees

	2 Jan. 2007	In 2006
Finance	37	14
Accounting	421	49
International Marketing	208	11
Management and Organizations	161	22
Business Law	31	5
Supply Management	67	11
Technology Research	15	7
Knowledge Management	82	23
SME Development	21	1
SME Management	1	1
<b>Total</b>	<b>1044</b>	<b>144</b>

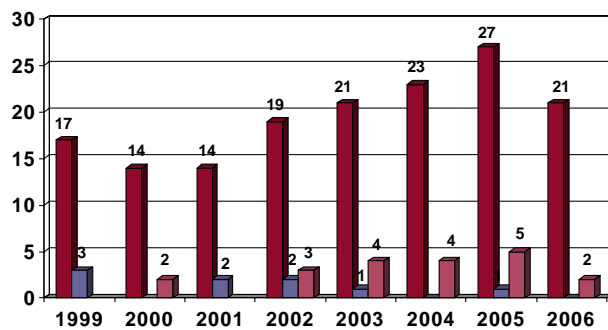
## Doctorates

D.Sc. (Tech.)	2 Jan. 2007	In 2006
Energy and Environmental Technology	39	4
Chemical Technology	48	2
Mechanical Engineering	36	5
Electrical Engineering	28	4
Information Technology	24	2
Industrial Engineering and Management	42	4
<b>Total</b>	<b>217</b>	<b>21</b>
<b>D.Phil.</b>	<b>11</b>	<b>-</b>
<b>D.Sc. (Econ. &amp; Bus.Admin.)</b>	<b>22</b>	<b>2</b>



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## Doctorates

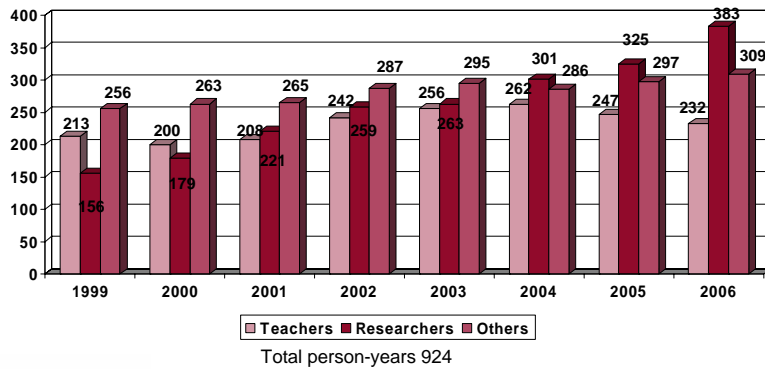


■ D.Sc. (Tech.), 2 Jan. 2007 total: 217  
■ D.Phil., 2 Jan. 2007 total: 11  
■ D.Sc. (Econ. & Bus. Adm.), 2 Jan. 2007 total: 22



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## Staff



## Independent Institutes

### Library

- Specialised in technology, industrial engineering and management, and business studies
- Wide collection of printed and electronic literature and journals
- 160 000 titles, 550 printed journals, 10 000 e-journals
- Also online services
- Training and consulting in information retrieval and research

## Independent Institutes

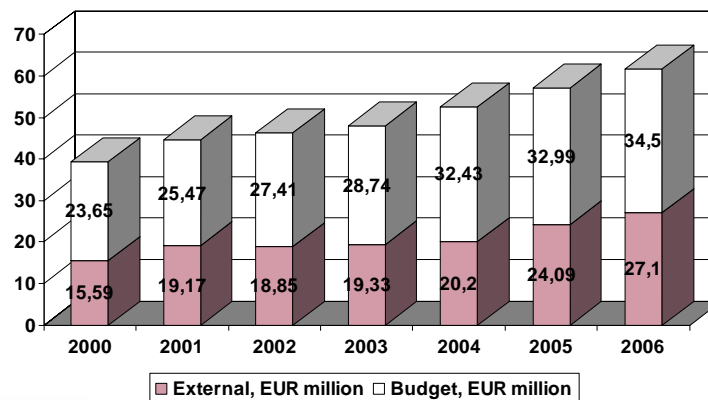
### Centre for Training and Development

- Provides continuing professional education open to all or tailored for companies
- Coordinates regional and corporate development projects
- Part-time Master's programmes
- Open university education
  - Annual curriculum amounts to approx. 300 ECTS credits
  - About 20 students admitted annually through a separate application procedure



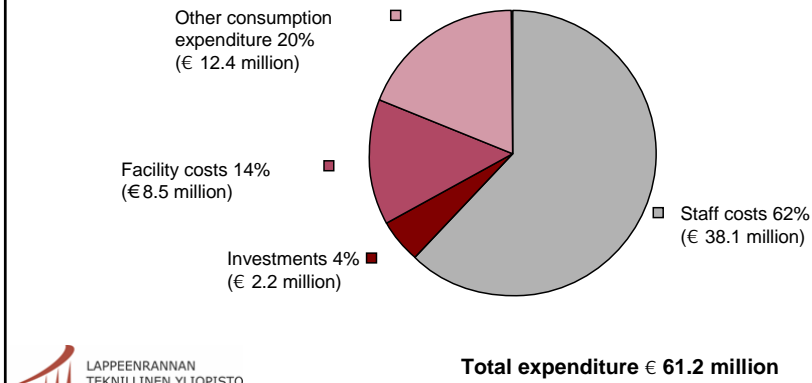
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## Development of Funding



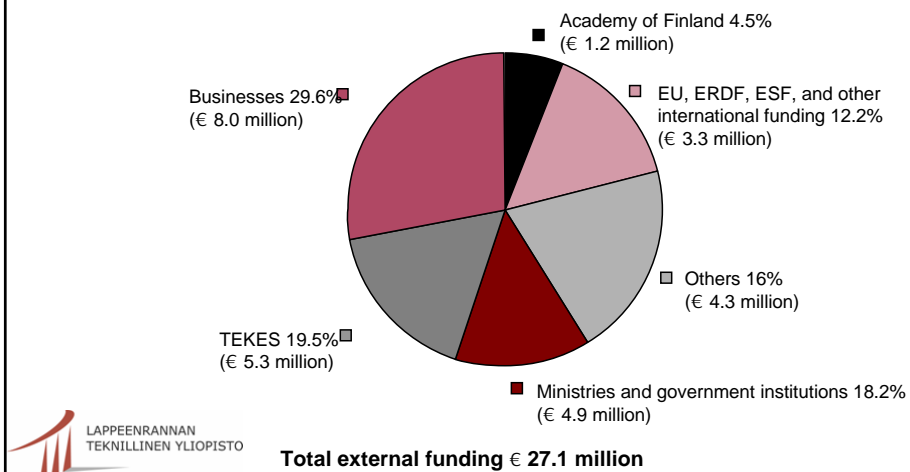
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## Expenditure in 2006



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## External Funding Sources 2006



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EXPERTISE IN TECHNOLOGY AND ECONOMICS



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## Lappeenranta Univ Tech Library

**Engineering, economics, and management**

- provides the students, teachers, and research personnel with the high quality information they need for their work
- serves as a local public scientific library
- offers education in information literacy
- European Documentation Centre



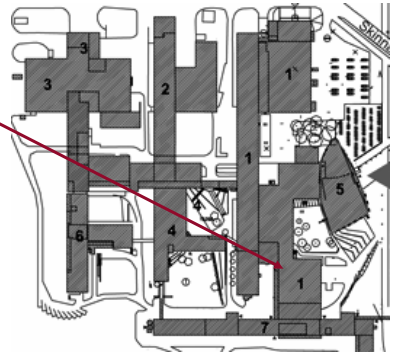
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LUT Library

13.7.2007

## LUT Library

- located in Origo - a very central location within LUT
- some small department libraries, reference book collections



LUT Library

passage to the  
Student Union  
building

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## Origo

- studying and working environment where the library collections, computers, and other equipment are available for customers
- active customer support
- helpdesk for students
  - open during terms Mon-Thu 9-18, Fri 9-15
  - occupied by staff members (library, student office, language centre) and four student workers



LUT Library

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## Library opening hours

Mon - Thu            8.30 a.m. to 6 p.m.  
Fri                    8.30 a.m. to 3.30 p.m.

Summer and Christmas time

Mon - Fri            8.30 a.m. to 3.30 p.m.



LUT Library

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## Numerical information



- staff 17
- 179.000 books
- 600 journal titles
- 10.000 electronic journals
- 112 online databases
- reference books, hand books, dictionaries
- theses
- text books for students



LUT Library

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## Library services

- Lending
- Journal routing
- Information service
- Interlibrary lending
- User education



LUT Library

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## Lending

- lending period for books 4 weeks
- lending period for text books and diploma theses 2 weeks
- short term loans -- overnight / over the weekend
- online requests and loan renewals available for customers
- self-service lending machine



LUT Library

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## Journal routing

- subscribed printed journals are available for routing
- journal routing service allows customers to read preferred journals in their own offices
- a new journal is first on an exhibition shelf for a week and after that it goes to routing
- routing is free to LUT staff
- routing is not available for students



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## Information service

- information consulting
- user education
- information searching
- “information specialist on duty” at the helpdesk



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## Interlibrary lending

- orders loans and copies from other Finnish or foreign libraries
- delivers loans and copies to other libraries in Finland and abroad



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## Information sources

- printed collections, searchable via the Wilma database
- LUTPub database for finding full texts and abstracts of LUT publications and theses
- electronic journals for browsing journals and journal articles
- online databases for information retrieval

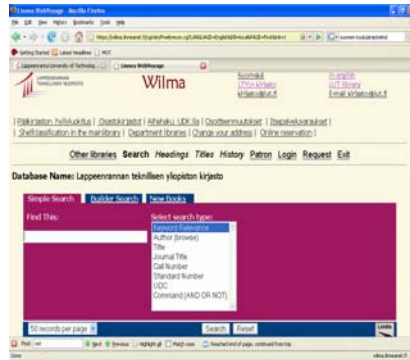


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## Wilma database

- information about *books* (since 1983)
- information about *all printed journals*
- information about *all theses*
- information about *all text books*



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## Linda database

- union catalog of all Finnish university libraries' databases
- shows which library holds a certain book or journal
- shows the availability of books in the libraries



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Authors: [Taylor, Liz](#)  
 Title: [Knowledge, information and the business process : revolutionary thinking or common sense? / Liz Taylor](#)  
 Format: book  
 Published: Oxford : Chandos , 2007  
 Series: [\(Chandos knowledge management series\)](#)  
 Links: [cover art](#)  
 ; GIF

Holding Libraries: [VALPURI - Turun kauppakorkeakoulun kirjasto](#)  
[HELKA - Helsingin yliopiston kirjastolaitos](#)

Library: [VALPURI - Turun kauppakorkeakoulun kirjasto](#)  
 Location: lähikokoelma - reading room collection  
 Call Number: 659 Tay  
 Number of Items: 1  
 Status: Not Charged  
[Back to Library list](#)

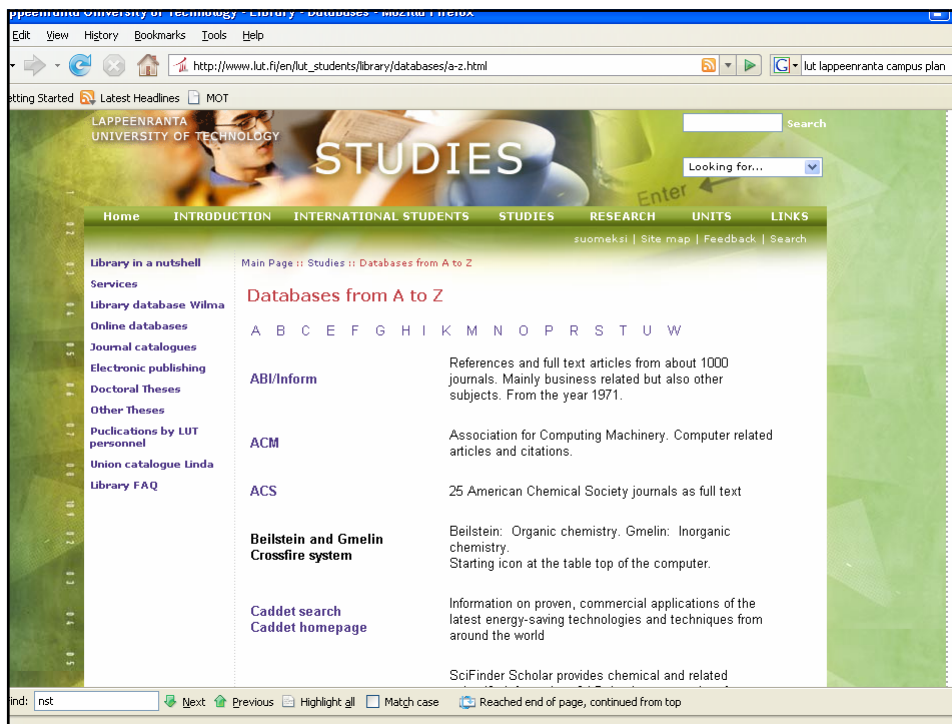
Library: [HELKA - Helsingin yliopiston kirjastolaitos](#)  
 Location: Käytt. tdk:n kirjasto Siltav.penger 20 R laina-aika 28 vrk  
 Call Number: Hk Dk 65 Taylor  
 Number of Items: 1  
 Status: c.1 Renewed - Due on 06/07/2007  
[Back to Library list](#)

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## Other online sources



- mainly accessible within the LUT network
- remote access available for staff and students
- links to databases from the Library homepage
- reference and full text databases



## Nelli search portal

- access to electronic journals, reference and full text databases, dictionaries, and library catalogues available at LUT
- possible to search for information from several databases simultaneously
- open access resources also available



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http://www.nelliportaali.fi/V/36GLFS1D31EDSFP6EEQYVG45V3NUJEN5SLP5HUQM7BGQH1MMN-40978?func... lut.lappeenranta-campus.p

Getting Started Latest Headlines MOT

LINDA - Union Catalogue of Finnish Un... Nelli - MetaSearch

**NELLI** Suon Pääs

QuickSearch | Find Database | Find e-Journal | **MetaSearch** | My Space Change Portal | Log In | End Session

Search | MetaSearch Results | Previous Searches

**MetaSearch**

Select Search Type: Categories

Category: Chemical engine

Sub Categories: General, Dictionaries, ALL

Simple Advanced

All Fields All Fields And GO

al engineering—General contains 39 databases

	Type	Actions
<input type="checkbox"/> Title	Kirjastolett.	(i) (+)
<input type="checkbox"/> Author	Lehdet	(i) (+)
<input type="checkbox"/> ISSN	Lehdet	(i) (+)
<input type="checkbox"/> ISBN	Lehdet	(i) (+)
<input type="checkbox"/> YEAR	Lehdet	(i) (+)
<input type="checkbox"/> DOAJ Directory of Open Access Journals (Full Text)	Lehdet	(i) (+)
<input type="checkbox"/> Elsevier - Science Direct (Full Text)	Lehdet	(i) (+)
<input type="checkbox"/> ABINFORM Global (ProQuest) (Full Text)	Lehdet	(i) (+)
<input type="checkbox"/> EBSCO - Academic Search Elite (Full Text)	Lehdet	(i) (+)
<input type="checkbox"/> EBSCO - Business Source Elite (Full Text)	Lehdet	(i) (+)
<input type="checkbox"/> Emerald (Full Text)	Lehdet	(i) (+)
<input type="checkbox"/> Wiley Interscience Journals (Full Text)	Lehdet	(i) (+)
<input type="checkbox"/> Advanced Polymers Abstr. (CSA)	Viitetietokanta	(i) (+)
<input type="checkbox"/> ARTO	Viitetietokanta	(i) (+)

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## Information Literacy (IL)

- **Information Literacy (IL) Competency Standards for Higher Education**

- approved by the Board of Directors of the Association of College and Research Libraries (ACRL) on January 18, 2000
- <http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm>

- basis for lifelong learning



## What is information literacy?

An information literate person can

- determine the extent of information needed
- access the needed information effectively and efficiently
- evaluate information and its sources critically
- use information effectively to accomplish a specific purpose
- understand the economic, legal, and ethical issues of information use



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## IL education in LUT

- **first-year students**
  - short lecture + library tour + online course
- **~third-year students** → integrated into courses which require information searching and use
  - lecture (+ training) / online course with learning assignments
- **special groups**
  - always tailored



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## Goals

- base on IL standards
- students learn the importance of reliable information and its use
- each student knows basics about LUT Library information sources and their use
- students learn to find printed and electronic material for their assignments from the LUT Library collections



## Case: Introduction to MSc studies at LUT

- mandatory course for all foreign LUT students
  - tour in the library in groups
  - online course in the Blackboard learning environment
    - three learning assignments on library issues
    - one learning assignment on department's issues



Blackboard Learning System - Mozilla Firefox

https://scapa.cc.lut.fi:8443/webct/urw/kc4130001.tp0/cobaltMainFrame.dowe...?SESSIONID=GkghsLh

Getting Started Latest Headlines MOT

Library\_PressDi... Isän sana foor... ALA | Informati... :: Näytä viesti -... SUOMA - Suom... Oppimiskeskus ... Etuovi.com Blackboard...

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Student View BK10A0300 Introduction to M.Sc. Studies - BK10A0300 Introduction to M.Sc. Studi


course Tools

- course Content
- assessments
- assignments
- alendar
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- yllabus
- eb Links


## Learning material

This page contains the learning material for this course. To complete the course, you should do the learning assignments. Examine also the Library homepage carefully before doing the assignments.


By clicking the icons below, you get to the three important parts of this course: [LUT Library](#), [Information searching](#) and [Online databases](#). Each part contains a learning assignment, which you can access by clicking the assignment icon on the sub-page. On this page, there is also an icon to the assignments.




[LUT Library homepage](#)




[LUT Library](#)




[Information searching](#)



[Online databases](#)



[Self test](#)



[Course completed](#)

ccpa.cc.lut.fi/944