Co-operation with the industry at the Chemical Engineering Faculty of BUTE

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Topics of the presentation

- Tradition
- Forms of co-operation
  - Gradual and post-gradual education
  - PhD and specialised courses
- Research and Development
- Future plans
Tradition

- **BUTE is more than 200 years old**
- **Chemical Engineering is more than 130 years old**

**Connections between industry and our faculty embodied in several famous persons:**

Dept. of Chemical Technology
Professor **J. Varga (1923-56)** inventor of sulphur resistant catalysts, hydrocracking, he was minister of industry
Professor **M. Korach (1957-63)** he worked in the ceramics industry in Italy
Professor **L. Vajta (1963-67)** he was the chairman of the board of directors of the Hungarian Oil Company

Dept. of Organic Chemical Technology, founded by **L. Goldberger**, owner of the biggest textile company for Professor **Csúrös**, who was the initiator of fine chemicals catalysis and the chemistry of plastics in Hungary

(Professors from the industry: **Földi, Mészáros, Fogassy**
Tradition

Dept. of Unit Operation, Professor K. Tettamanti, chief engineer of a pharmaceutical company

Dept. of General and Analytical Chemistry, Professor L. Erdey and F. Paulik and J. Paulik invented derivatograph, the first commercialised automated, many sided thermoanalytical instrument

Dept. of Organic Chemistry, Professor Em. Cs. Szántay, chairman of the Association of Hungarian Inventors, he has numerous patented processes applied in the pharma industry
Forms of co-operation in the education

- **Contracts**
  - MOL  GE  Paks
  - BASF summer courses
  - Richter  Egis  Chinoin
  - Res. Inst. for Chemistry of HAS

- **Scope of co-operation**
  - Graduate education: lecturers, tutors from the industry
    - Summer practice at the firms
  - Common diploma work
  - Post-graduate education: common PhD research
    - PhD fellowship donation
  - Specialised engineering courses
Specialised engineering courses

Two years, four semester studies
Environmental
Corrosion
Pharmaceutical
Analytical engineering

Short specialised courses (examples)
Food chemistry and analysis
Chromatography

These courses serve as good contact creating opportunities!
Forms of co-operation at other faculties

■ The Faculty of Machine Engineering

„Sandwich” type education at large companies,
the students spend some interim semesters working at the industrial partner.
Financial support

– **J. Varga Foundation**
  - The companies gave the starting capital of the foundation
  - Targeted donation gets to the granted department through the foundation

– **Subscription to professional training**
  - The firms can give partly this kind of tax to schools and universities for buying instruments used strictly in education
Research & Development

- **Research contracts**
  Solving of problems, measurements, using of university expertise, deploying instrumentation to the university

- **Joint research** financed by the Hungarian state (NKFP) or by the EU (FP 4, 5, 6)

  **Graduate or PhD students are frequently involved!**
Future plans

- **Targeted training courses** according to the need of the industry
- **Joint practical courses**, like designing task, diploma work
- **PhD program for engineers** working in the industry
- Secrecy problems have to be solved!