

**Concept for Teaching Optoelectronics
and Laser Systems
in the Microelectronics Education**

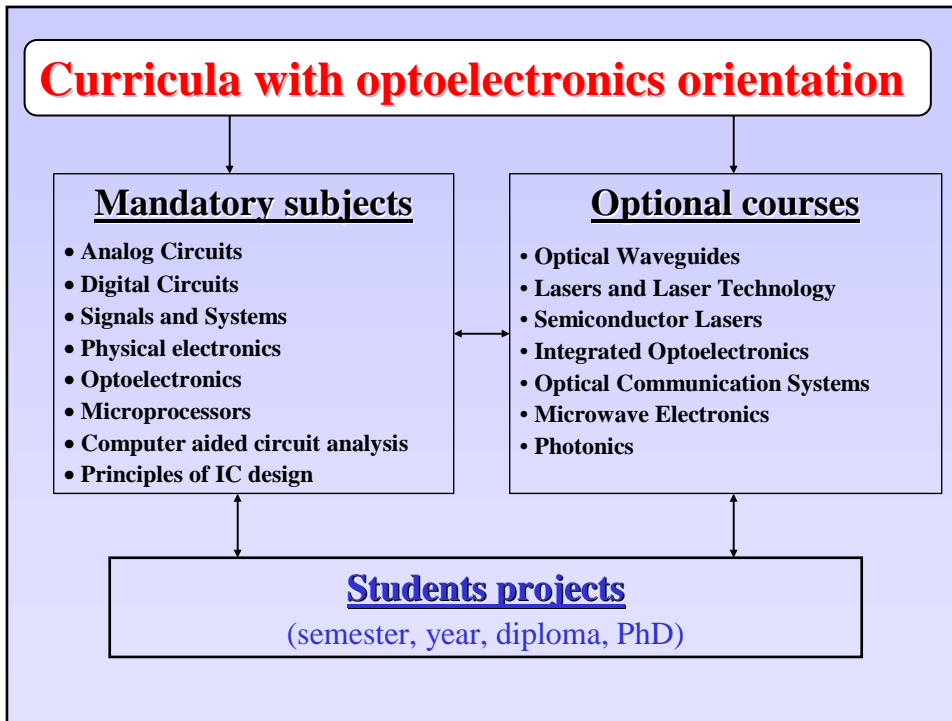
Frantisek Uherek and Daniel Donoval

Department of Microelectronics
Slovak University of Technology in Bratislava
and
International Laser Center in Bratislava
Slovakia

uherek@ilc.sk

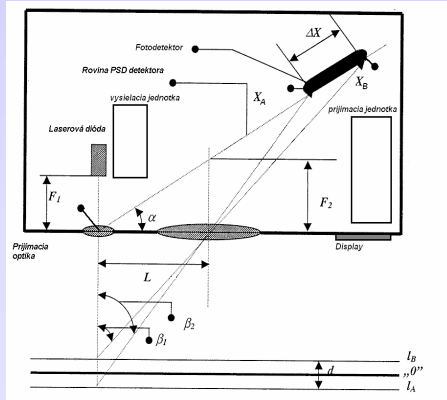
Microelectronics & Optoelectronics

- *growing requirements on speed of communication systems – incorporation of optoelectronics to microelectronics curricula*
- *interdisciplinary education*
- *deep and wide theoretical background*
- *specialization via optional courses and projects*
- *well equipped laboratories*



Example of students project 1

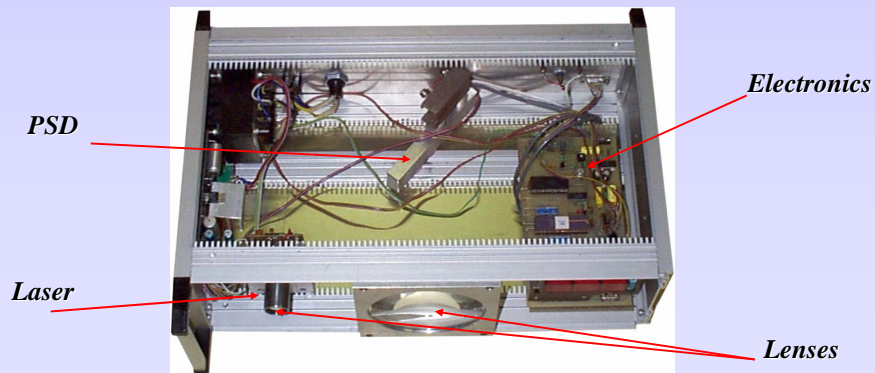
*The **design**, realization and characterization of a triangular laser distance measurement system including computer control*



- made by teams of two students
- the first student designs, fabricates and verifies \ the optical part
- the second student deals with the electronic and control part

Example of student project 1

*The design, **realization** and characterization of a triangular laser distance measurement system including computer control*



Conclusions

- *new graduates with complex micro- & optoelectronics education*
- *teaching supported by students projects*
- *high motivation of students*
- *effective collaboration of STU and ILC*