## Slovak University of Technology in Bratislava

### MONITORING AND RESULTS OF THE EDUCATIONAL PROCESS

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### Content

## Monitoring and results of the educational process

- Entrance students
- Student's learning
- Student's progression in their studies
- Student's opinion on the educational process
- Graduates placement
- Employed graduates' and employers opinion on the graduates' results







#### **Entrance students**

### Attractiveness of SP (yearly monitoring):

- Number of students enrolled in the first course year
- Possesion of students admission requirements
- Enrolled students geographical and secondary school of provenance
- 1<sup>st</sup> course year 2017: 50% of students from grammar school, 50 % from vocational sec. School, 33% of women







### Entrance students: Faculty of CE SUT Bratislava

#### Number of students in Bc. degree

Class	Year	Year	Year	Year	Year	
Bc.	2013/14	2014/15	2015/16	2016/17	2017/18	
1.	650	626	501	451	430	
2.	649	516	453	325	314	
3.	688	705	590	564	439	
4.	360	353	347	318	250	
Total	2347	2200	1891	1657	1433	







# Entrance students: Faculty of CE SUT Bratislava Decrease of number of students after 1<sup>st</sup> year of study (Bc. Degree)

Academic year	Number of students (1 <sup>st</sup> course)	Decrease of students after 1st year	Decrease of students in % after 1 year
2011/12	709	200	28
2012/13	747	164	22
2013/14	650	201	31
2014/15	626	212	34
2015/16	514	208	40
2016/17	462	182	39







### Entrance students: Faculty of CE SUT Bratislava Number of students in Master (Ing) degree

Class	Year	Year	Year	Year	Year
Master "Ing"	2013/14	2014/15	2015/16	2016/17	2017/18
1.	543	480	498	408	351
2.	609	588	522	526	467
Total	1152	1068	1020	934	818







# Entrance students: Faculty of CE SUT Bratislava Decrease of number of students after 1<sup>st</sup> year of study (Master degree)

Academic year	Number of students (1 <sup>st</sup> course)	Decrease of students after 1st year	Decrease of students in % after 1 year
2011/12	537	21	8
2012/13	576	29	5
2013/14	545	27	5
2014/15	480	24	5
2015/16	501	35	5
2016/17	408	33	8







# Entrance students: Faculty of CE SUT Bratislava Number of students in PhD. degree

PhD. study	Year	Year	Year	Year	Year
Form of study	2003/14	2014/15	2015/16	2016/17	2017/18
Daily	244	229	187	170	150
External	49	48	38	25	22
Total	293	277	225	195	172







# Entrance students: Faculty of CE SUT Bratislava Number of foreign students

Academic year	2013/14	2014/15	2015/16	2016/17	2017/18
Number of all students	3500	3268	2911	2590	2251
Number of foreign students	102	86	90	50	77
Number of foreign students in %	2,9	2,6	3,1	1,9	3,4







### Students learning

- Checking the effectiveness of the course units:
  - the number of students who have to take the examination in academic year
  - The number of students who have passed the examination in the academic year
  - The medium value of the grades who have passed the examination
  - The grade variance







### Students learning

- Checking the effectiveness of the course units
  - The control of the results of the assesment tests (adequacy of the the test to check the level of achievement of the learning outcomnes)
  - Correctness of the assesment of the students learning by lecturer
  - Control of the development of the assesment tests
  - Ex-post control of the written tests







### Students progression in their studies

- Checking the effectiveness of the course units
  - The number of students who pass from one course year to the next one and number of unsucceessful students
  - The median and the mean value with variance of the number of ECTS credits with which students pass from one course year to the succesive one
  - The number of graduates within the official length of the SP.



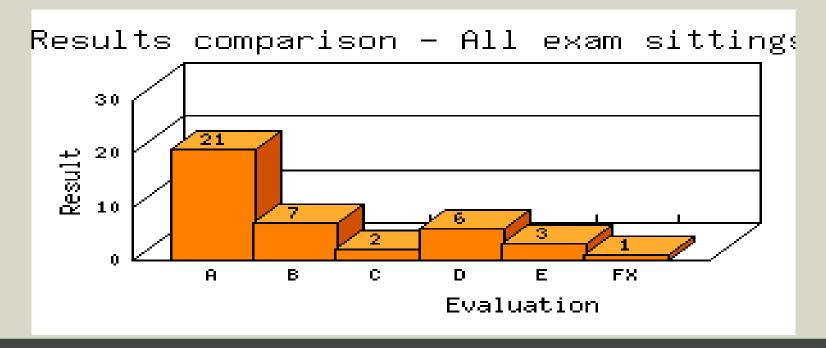




### Students progression in their studies

Faculty of CE SUT Bratislava- Example of evaluation the students in one unit (Output from AIS)

- All exam sittings (attendance: 40)
- Course supervisor: prof. Boris Bielek, PhD









## Students opinion on the education process

- Checking the effectiveness of the educational process by students:
  - The course units
  - The training period outside
  - The periods of international mobility
  - The student support services (final year students)
  - The survey of the entrance students opinion (orienteering services) <u>www.stavebnafakulta.sk</u>
  - Comment: Form of monitoring: min. list of questions reported in document







## Students opinion on the education process

### Monitoring instruments.

- On-line or paper questionnaires
- Interviews
- Before the end of lessons
- During examination period
- Free discussion meeting of students with dean, vice dean for educational process, guarantour etc.







## Students opinion on the education process Participation of students in evaluation of educational process Faculty of CE SUT Bratislava

Academic year	<b>10/11</b> Summer	11/12 Summer	<b>12/13</b> Summer	13/14 Summer	<b>14/15</b> Summer	15/16 Winter	<b>15/16</b> Summer	16/17 Winter	16/17 Summer
Possible number of respondents	3669	3558	3510	3366	3093	2950	2720	2568	2432
Real number of respondents	939	1238	1418	1500	1500	1567	1211	1474	1265
Participation in %	25	34	40	44	48	53	44	57	52
Number of units	542	397	393	386	371	454	353	398	349
Number of units with feedback	377	339	342	334	321	301	296	289	290
Units evaluation in %	69	85	87	86	86	66	83	72	83







### Graduates' placement

#### AIM:

- Application of graduate qualification on market
- Correspondence of the SP educational objectives to the education needs of a labour market
- Monitoring of the graduates placement on market through the survey:
  - The percentage of employed graduates
  - The percentage of graduates for PhD. study (Master graduates)
  - The placement time in the labour market
  - The effectiveness of the degree in the working activity after 1
     +3 years since graduation
  - The number of students from Bc degree to Master degree







### Employed graduates' and employers' opinion on the graduates'education

#### AIM:

- Checking the adequancy of SP learning outcomes to the educational needs of the labour market
- Monitoring the opinions of the employed graduates on the education process (after 1 + 3 years since graduation)
- Monitoring the opinions of employers on the graduates education







### Employed graduates' and employers' opinion on the graduates'education

### Monitoring instruments:

- On-line or paper questionnaires
- Interviews (guarantor or head of department with graduates)
- Periodicity (annual or every 3 years)
- Percentage of employed graduates to total number of graduates
  - Comment: This activity needs to keep contact to all graduates for possible future comminication







### Bologna Process Strengths

- Higher level of SP compatibility at universities of European countries
- The same structure of educational process with 3 degrees allows higher mobility of students in foreign universities
- Credit system allows some units to study at home university and some abroad according to SP requirements
- After finishing 1st degree student has qualification (Bc.) for practical work or continually study in Master degree







### Bologna Process Strengths

- Higher possibility of distance education using progressive information technology and didactic technique
- Possibility to study special courses at universities or companies with high credit on market
- Using of qualification at world labour market
- Higher possibility of study recognition in foreign countries







### Bologna Process Weakness

- Traditional 5 years university systems were changed into 3 degree system (Bc, Master and PhD), but the structure of units remind the same:
  - The study of Bc. degree is for students more difficult like Master (un-logical)
- More free credit system creates problem of students to keep 180 credits after 3 years of Bc. study
- 98 % of students after Bc. degree prefer to study on Master degree and not to go to practice







### Bologna Process Weakness

- Students in Bc. degree have no needed practical experiences to work in companies
- Influence of labour market requirements is minimal in Bc.
   Degree
- Teachers prefer their teaching units not according to labour market needs but according to their personal interest
- A lot of natural-science units in Bc. degree create decrease of number of students after 1<sup>st</sup> year of study







#### Conclusion

- Changing the structure of units in all 3 degrees:
  - Bc model- more practical units with possibility to go to labour market
  - Master model- more scientific able only for better and creative students from Bc. Model
  - PhD. model- scientific model only for the best students with preconditions and ability to develop the science and research in SP
- Higher level of students mobility with aim to exchange the experience (international scientific competition of students)
- Distance education with possibility to participate on lectures and units at European universities with high credits







### Thank You!

