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ArcPy in Education. Lessons learnt in the MSE master's programme

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ArcPy in Education (MSE)

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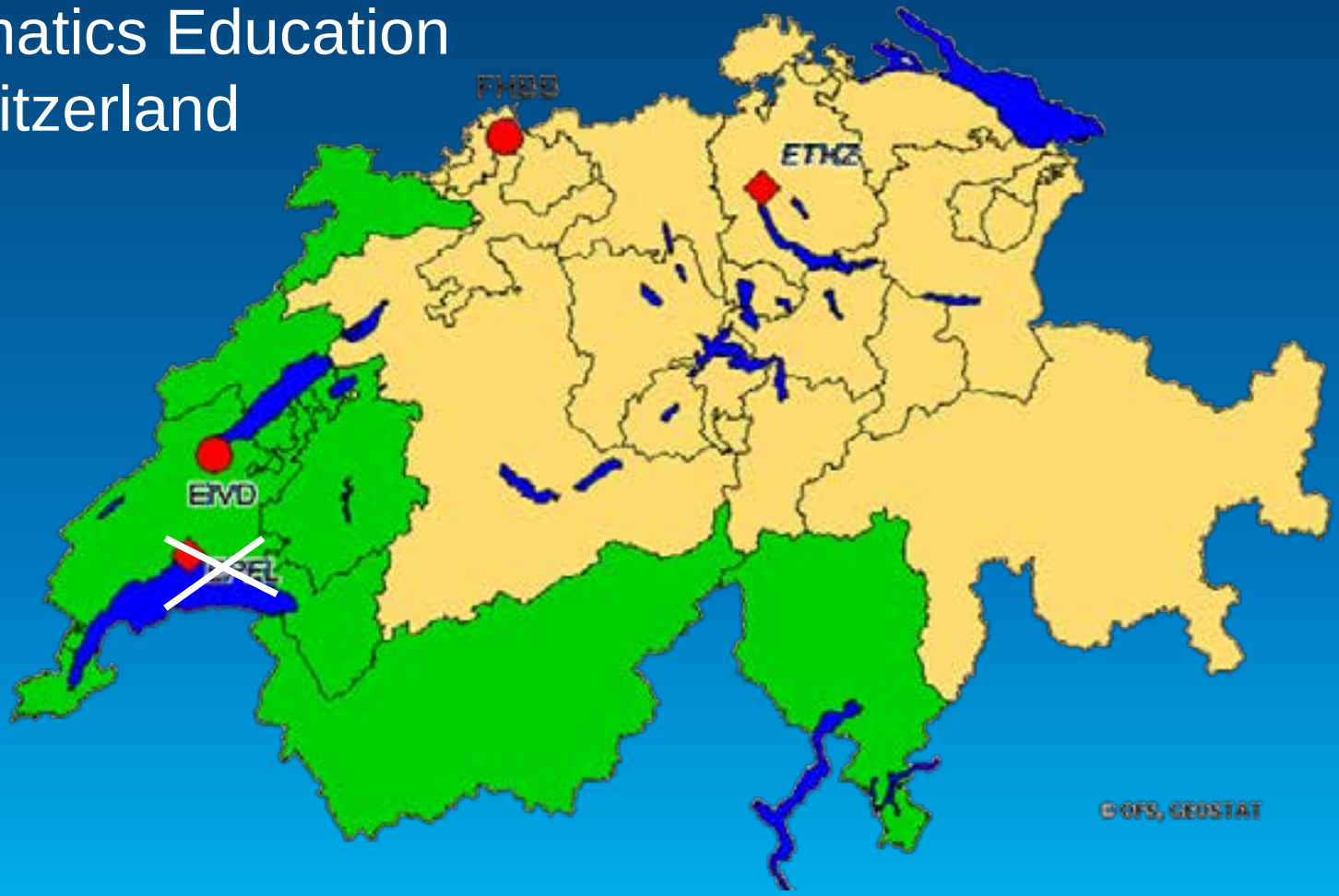
Facts & Figures

Students Bachelor: ~65
Students Master: ~8
♂: ~ 85%
♀: ~ 15%

Education since 1963 (!)

ArcPy in Education (MSE)

Geomatics Education
in Switzerland



ArcPy in Education (MSE)

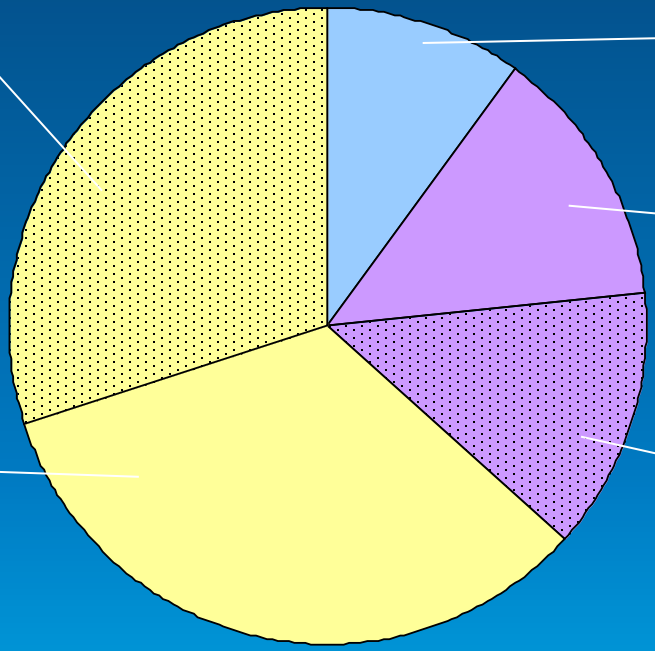
MSE | MASTER OF SCIENCE IN ENGINEERING

Local Modules
57 ECTS-Credits

Central Modules
33 ECTS-Credits

Master Thesis in Geoinformation-technology
27 ECTS-Credits

Immersion Geoinformation-technology
30 ECTS-Credits



Contextmodules
>= 9 ECTS-Credits

Theory
>= 9 ECTS-Credits

Technical Immersion
>= 6 ECTS-Credits

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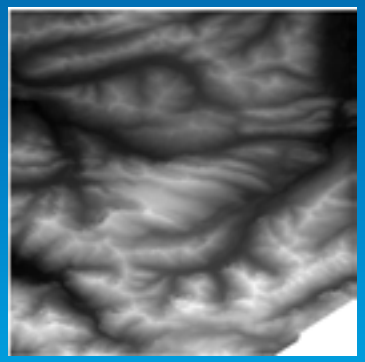
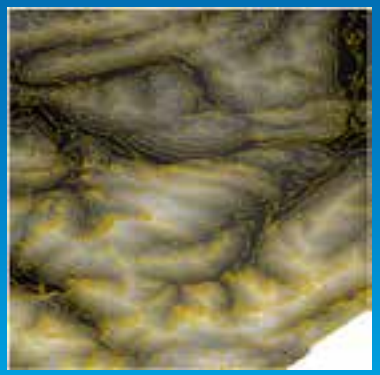
Central Module “Geoprocessing”

- Understanding structures of Geoinformation (GI)
- Processing data independent of GI-Software
- Active & passive skills in writing their own GI processing scripts





ArcPy in Education (MSE)

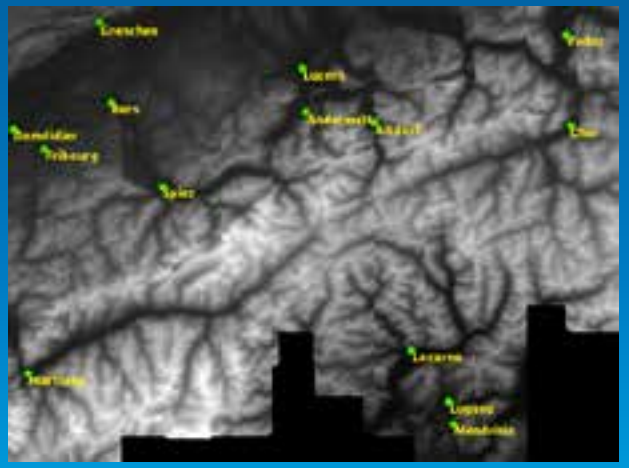
Central Module “Geoprocessing”

- Read/write vector data (file- and DB-based)
- Read/write raster data
- Process data (geometry and attribute operations)

ArcPy in Education (MSE)

Central Module “Geoprocessing”

- Basic cartographic rendering
- Orchestrate semi-complex workflows



Central Module “Geoprocessing”

Central Module “Geoprocessing”

- Most of the tasks: FOSS
  - Script-based and commandline-oriented

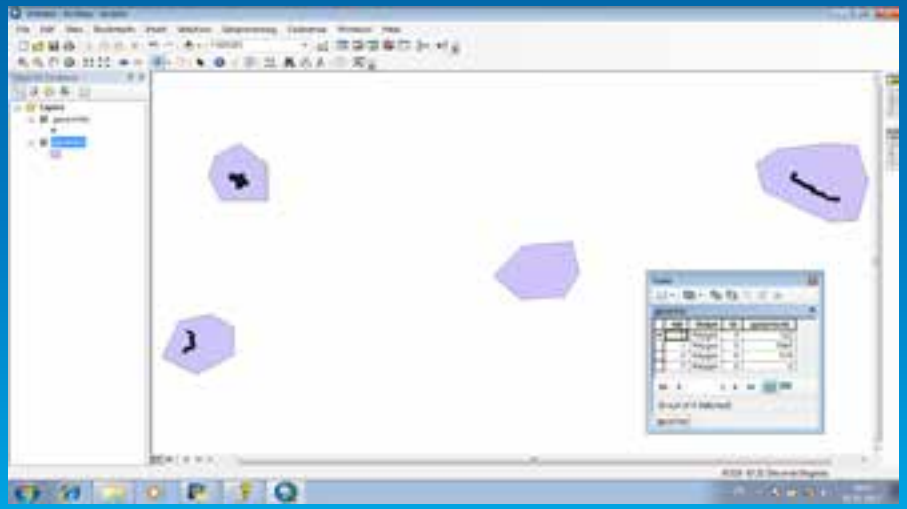
- Alternative: ArcPy

  - Script-based – but not only!
  - Well-integrated into GI-Software
  - Builds on (familiar) objective-model
  - “Cause and effect” easily visualised in ArcGIS
  - Good online documentation

ArcPy in Education (MSE)

Central Module “Geoprocessing”

- Current Contents:
  - Scripting with ArcPy and Debugging, Parameter, integration with ArcToolbox
  - Lists, Cursors
  - Reading / writing GI
  - Design & process semi-complex task



ArcPy in Education (MSE)

Central Module “Geoprocessing”

- Wishlist:
  - Performance…/ stability
  - Plattform independence (support Mac OS!!)

Thank you!

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