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NETCHEM

Open day
Fakultet tehničkih nauka
NETCHEM ERASMUS+ projekat

Novi Sad, 05.06.2019.

Predstavljanje modernizacije edukacionih materijala za predmet Monitoring i upravljanje sistemima studentima 3. godine studijskog programa inženjerstvo zaštite životne sredine

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Fakultet tehničkih nauka, Univerzitet u Novom Sadu

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Informacije o predmetu

Master akademske studije

Inženjerstvo tretmana i zaštite voda – TEMPUS

Izborni predmet

Cilj predmeta: Sticanje znanja i veština za izvođenje monitoringa životne sredine u komunalnim preduzećima i industrijskim sistemima (otpadni gasovi – deponijski gasovi i biogasovi, procedna voda, podzemna voda)

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Ocena znanja

- **2 TESTA**
- **2 KOLOKVIJUMA**

- **3 TESTA na moodle – max 24 bodova**
- **2 KOLOKVIJUMA – max 40 bodova**
- **Case study – max 30 bodova**

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Konceptualni prikaz edukacionih elemenata

- **Mentorski rad**

- **Planiranje monitoringa – predavanja i vežbe (2 nedelje)**
- **Priprema za uzorkovanje – predavanja i vežbe (2 nedelje)**
- **Uzorkovanje – predavanja i vežbe (3 nedelje)**
- **Analiza – predavanja i vežbe (2 nedelje)**
- **Izrada izveštaja i mišljenja – predavanja i vežbe (2 nedelje)**
- **Obrada podataka i tumačenje rezultata – predavanja i vežbe (2 nedelje)**
- **Case study (2 nedelje)**

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ISHODI-UNAPREĐENJA

- **11 FILMOVA – 3 EDUKACIONA ELEMENTA**
- **1 LEKCIJA SA UDALJNIM PRISTUPOM LABORATORIJI – REMOTE ACCESS LABORATORY GUIDE**
- **3 TESTA na moodle – max 24 bodova**


Otpadov
Velika
Zajedno smo lepši, zajedno smo jači!
Dubre!? Ne kaže?
TOSHIBA
UNS FTN
CLASSROOM


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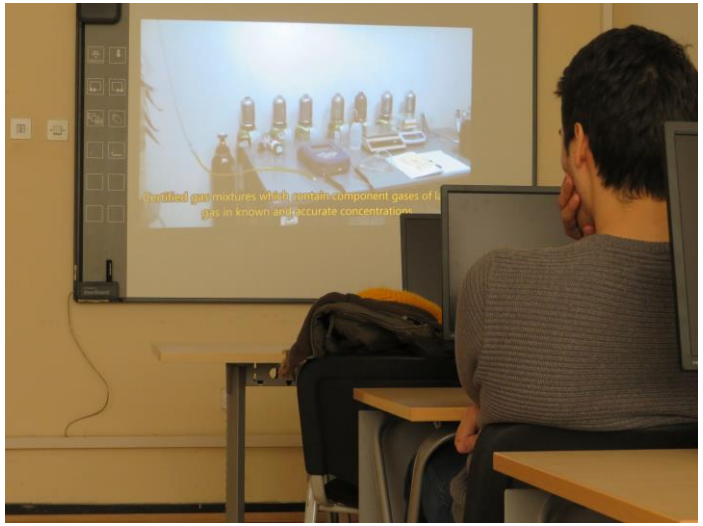
CLASSROOM


UNS FTN LAB

DESCRIPTION OF THE EDUCATIONAL ELEMENT I	
Educational element title	**Landfill gasses sampling and measuring techniques**
Title of teaching unit	Sensors techniques in environmental monitoring programmes
Educational objectives of educational element	- The main objective is to develop knowledge about types of landfill gasses measuring methods and significance of sensor techniques application in process of determination of landfill gasses composition. - Second goal is to introduce the GEM 2000 plus sensor technique as suitable method for determination of landfill gasses composition as well as practical usage of this instrumentation.
Required preliminary knowledge and skills	Landfill gasses composition. Characteristics of landfill gasses.
Material available at Moodle platform for the educational element: - **Type (.mp4/.avi/.ppt/.pdf/.doc/.jpeg …):** - **Size (MB):** - **Used language in the material:**	- **4 Video clips** - / - Serbian/English
Remote access classroom-laboratory	No

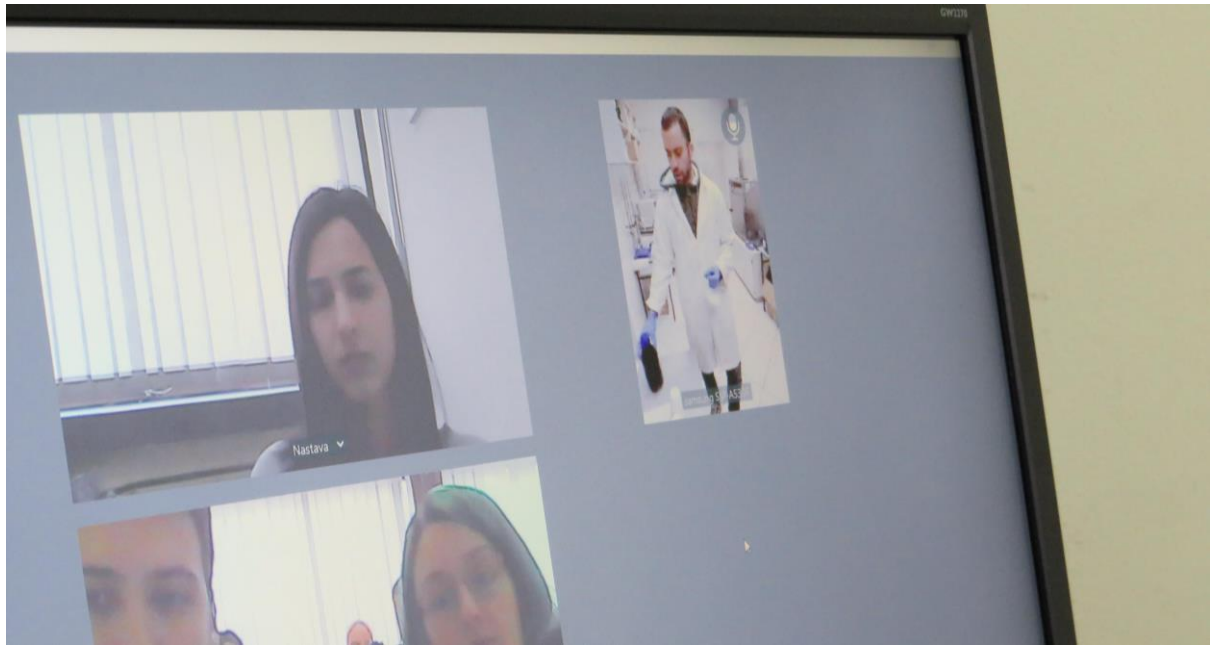
DESCRIPTION OF THE EDUCATIONAL ELEMENT II	
Educational element title	**Groundwater sampling techniques and field measurements**
Title of teaching unit	Groundwater monitoring: groundwater sampling technique, measuring of groundwater level in wells (piezometers), instrumentation in groundwater monitoring, field measurements.
Educational objectives of educational element	- Primary goal is to develop the knowledge to interpret the requirements of the legislation regarding the groundwater monitoring programmes on landfill sites. - Second goal is to introduce the landfill groundwater monitoring protocol – planning of monitoring, sampling, measuring of groundwater level in piezometers, field measurements, transportation and storage of samples.
Required preliminary knowledge and skills	Characteristics of landfill groundwater. Significance of groundwater monitoring programmes on landfill sites.
Material available at Moodle platform for the educational element: - **Type (.mp4/.avi/.ppt/.pdf/.doc/.jpeg …):** - **Size (MB):** - **Used language in the material:**	- Video clips **(2 + 2)** - / - /
Remote access classroom laboratory	No

DESCRIPTION OF THE EDUCATIONAL ELEMENT III	
Educational element title	**Leachate sampling techniques and field measurements**
Title of teaching unit	Leachate monitoring: leachate sampling technique, instrumentation in leachate monitoring, field measurements.
Educational objectives of educational element	- Primary goal is to develop the knowledge to interpret the requirements of the legislation regarding the leachate monitoring programmes on landfill sites. - Second goal is to introduce the landfill leachate monitoring protocol – planning of monitoring, selection of sampling points, sampling, field measurements, transportation and storage of samples.
Required preliminary knowledge and skills	Generation of leachate on landfill site. Characteristics of leachate samples. Significance of leachate monitoring programmes on landfill sites.
Material available at Moodle platform for the educational element: - **Type (.mp4/.avi/.ppt/.pdf/.doc/.jpeg …):** - **Size (MB):** - **Used language in the material:**	- Video clips **(2 + 3)** - / - /
Remote access classroom-laboratory	No



DESCRIPTION OF THE EDUCATIONAL ELEMENT III	
Educational element title	**Handling of water samples**
Title of teaching unit	Storage, preparation and basic physico-chemical analysis of water samples
Educational objectives of educational element	-Learn about principles of good laboratory practice. -Perform basic physico-chemical analysis (multiparameter device, turbidimeter, BOD and COD determination).
Required preliminary knowledge and skills	Basics of GLP. Basics of measuring techniques and instrumental analysis.
Material available at Moodle platform for the educational element: - **Type (.mp4/.avi/.ppt/.pdf/.doc/.jpeg …):** - **Size (MB):** - **Used language in the material:**	 - / - / - /
Remote access classroom-laboratory	**YES**


Genius
GW1270
Nastava
samsung SM-A530F


GW1270
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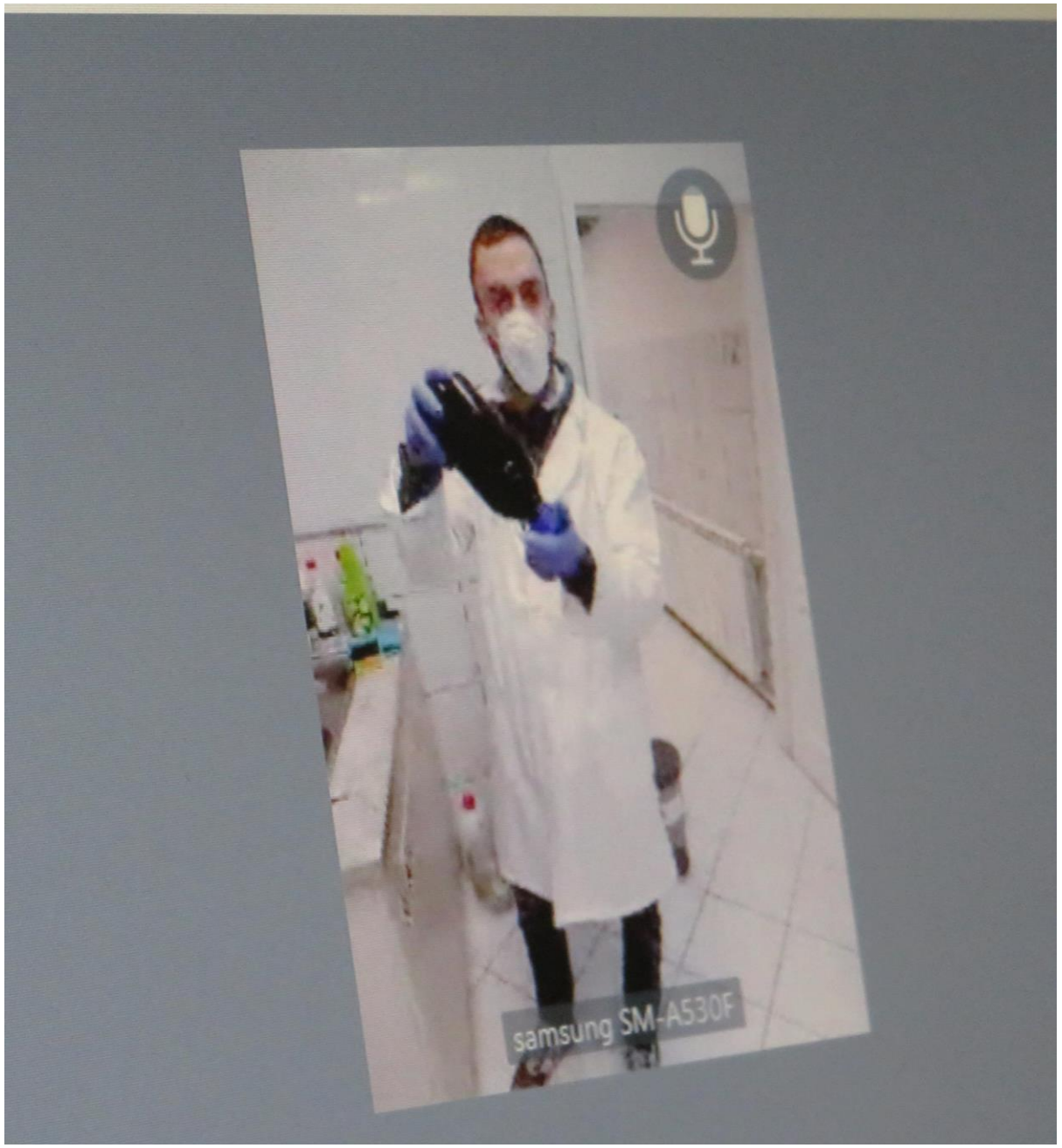
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