# Information sheet for the course
# Seminar in Organic Chemistry of Materials

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| **University:** *Alexander Dubček University of Trenčín* | |
| **Faculty:** *Faculty of Industrial Technologies in Púchov* | |
| **Course unit code:** *MI-PV-6* | **Course unit title:** *Seminar in Organic Chemistry of Materials* |
| **Type of course unit:** *optional* | |
| **Planned types, learning activities and teaching methods:**<br>*Lecture*: *0*<br>*Seminar: 2 hours weekly/26 hours per semester of study; face to face*<br>*Laboratory tutorial: 0* | |
| **Number of credits:** *2* | |
| **Recommended semester:** *2nd semester in the 1st year full-time*<br>*2nd semester in the 1st year part-time* | |
| **Degree of study:** *the 1st degree of study (Bachelor's degree)* | |
| **Course prerequisites:** *none* | |
| **Assessment methods:**<br>*During the semester: 10 control tests, each test – 2 points. It is necessary to obtain 10 points from all 20 points.* | |
| **Learning outcomes of the course unit:**<br>*Student has a systematic and complex knowledge in given area. Student knows the connections and relations between the individual reactions. Student understands the basic theories, methods and procedures. Flowing from lectured themes, student is able to solve the given chemical reactions.* | |
| **Course contents:**<br>1. *Nomenclature of fundamental hydrocarbons.*<br>*2. Nomenclature of hydrocarbons derivatives.*<br>*3. Saturated hydrocarbons – substitution radical reactions, isomers.*<br>*4. Unsaturated hydrocarbons, reactions: addition, radical, electrophilic, substitution radical.*<br>*5. Aromatic hydrocarbons, electrophilic substitution reactions, position of substituent on aromatic core.*<br>*6. Halogen derivatives, substitution nucleophilic reactions, elimination reactions.*<br>*7. Hydroxyderivatives, oxidations, substitution nucleophilic reactions, elimination reactions.*<br>*8. Aldehydes and ketones, addition nucleophilic reactions.*<br>*9. Carboxylic acids, esterifications, decarboxylations.*<br>*10. Acidity and alkalinity of organic compounds.*<br>*11. Nitrogen compounds: nitro and nitroso derivatives.*<br>*12. Amines and diamines, diazonium salts.* | |
| **Recommended of required reading:**<br>*1. Skalková, P. a kol.: Pracovný zošit z organickej chémie materiálov, TnUAD, Trenčín, 2009.*<br>*2. K. Weissermel, H.-J. Arpe: Industrial Organic Chemistry ,VCH, Weinheim,2003, ISBN 3-527-26995-9.*<br>*3. J. Svoboda: Organická chemie I, 1.vyd. VŠCHT, Praha, 2007. 310 s. ISBN 97-88-070-80561-9.*<br>*4. Pacák, J.: Reakce organických sloučenin, Karolinum Karlova Univerzita Praha, 2009.* | |
| **Language:** *Slovak* | |
| **Remarks:** *The course is in summer semester.* | |

**Evaluation history:**
Number of students: *0*

| A | B | C | D | E | FX |
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| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**Lecturers:** *doc. Ing. Petra Skalková, PhD.*

**Last modification:** *31.03.2014*

**Supervisor:** *prof. Ing. Darina Ondrušová, PhD.*