

TTÜ VIRUMAA KOLLEDŽI TEADUS- JA ARENDUSTEGEVUSE AASTAARUANNE 2013

1. Struktuur (Struktuuriüksuse nimi (eesti ja inglise keeles), struktuuriüksuse juhataja nimi. Struktuuriüksuse koosseisu kuuluvate õppetoolide, lektoraatide, laboratooriumide, osakondade või muu üksuse loetelu eesti ja inglise keeles ning nende juhatajate nimed)

TTÜ Virumaa Kolledž (TUT Virumaa College), Viktor Andrejev

- Kütuste keemia ja tehnoloogia õppetool (Chair of fuel chemistry and technology), Hella Riisalu
- Keemiatehnoloogia lektoraat (Division of Chemical Engineering), Antonina Zguro
- Matemaatika ja infotehnoloogia lektoraat (Division of Mathematics and Infotechnology), Žanna Gratšjova
- Ehituse ja mehaanika lektoraat (Division of Constructing and Mechanics), Gennadi Arjassov
- Energeetika ja automaatika lektoraat (Division of Energetics and Automation), Olga Ruban
- Humanitaar- ja sotsiaalsainete lektoraat (Division of Humanities and Social Sciences), Kaire Viil
- Kütuste tehnoloogia teadus ja katselaboratoorium (Fuel technology Research Testing Laboratory), Rein Muoni
- Põlevkivi Kompetentsikeskus (Oil Shale competence centre), Kalle Pirk
- Õppetalitus (Office of Learning), Anu Piirimaa
- Raamatukogu (Library), Elfrida Pavlova
- Infrastruktuuri talitus (Office of Infrastructure), Sergei Popov
- Arendustalitus (Development Office), Mare Roosileht
- Majandustalitus (Office of Economic Affairs), Irina Gorobets
- Üliõpilaskodu (Students' Dormitory), Tatjana Garbussova

2. Teadus- ja arendustegevuse (edaspidi T&A) iseloomustus

In 2013, R&D studies of Virumaa College focused on the following topics:

1) In Fuel Technology Research and Testing Laboratory, the research related to oil-shale refining was continued. Different oil shales and mixtures of solid organic materials were processed in a flow-through reactor. The chemical and physical properties of the products of the reaction were analysed. The preliminary results indicate that, at least in laboratory, there are possibilities to increase the yield of shale oil. However, the industrial feasibility of such reactions has yet to be analysed.

2) In Oil Shale Competence Centre, the meta-analysis of the studies addressing the environmental impacts of oil-shale industry was performed. The scientific publications as well as the R&D project of the period 2003-2013 were analysed and their results were classified according to the environmental subjects. The results of the meta-

analysis indicate that the environmental issues related to the mining of oil shale are relatively less studied as compared with the impacts of oil-shale processing. This misbalance causes uncertainties for the developing of new mines in ecologically fragile areas.