



COURSE DATASHEET

Semester:	2012/13/1
Course:	Economic Foundations of Petroleum Refining
Code:	VEMKMOL112G
Responsible department:	Department of Hydrocarbon and Coal Processing
Department code:	MKOL
Responsible instructor:	Artur Thernesz

Course objectives:

Introduction of basics of refining economy for the students.

Course content:

1. Introduction; 2. Brief Introduction of history of crude oil refining; 3. Type of crude oils, aspects of crude oil selection, products, product qualities, demand trends, 4. Refinery configurations, a. comparison of achievable margins in function of technologies applied – hydro skimming, catalytic cracking, hydrocracking, coking, complex crude oil processing - residues free refinery; b. different processing ways of intermediate products in function of the margin, e.g. gasoline – diesel flexibility, gasoline –naphtha; 5. Profitability of the crude oil refinery a. cost of feeds, refining costs, incomes; b. calculation of margin; c. factors affecting the margin; 6. Time dependence of margin, other influencing factors a. effect of the change in the quality of products; b. safety and environmental protection issues; c. demographic effects; d. sustainable development; e. globalization, political effects; f. speculations; 7. Cost structure of crude oil refining a. fixed costs; b. variable costs; c. effect of stocks; 8. Refining benchmark a. efficiency; b. competitiveness; 9. Annual Report, Types and contents I. Balance sheet 10. Annual Report, Types and contents II. Profit-and-loss statement 11. Annual Report, Types and contents III. Cash Flow statement 12. Funding of investments a. Business activity of the company; b. Leverage analysis; 13. Estimation of cash flow in case of company financing analysis a. separation between expected cash flow and cost of capital; b. relevant cash flows, inflation, currency exchanges; c. tax considerations 14. Cost efficiency calculations of investment Net Present Value (NPV), Internal Rate of Return (IRR), Profitability Index

Requirements, evaluation and grading:

Attending of the lectures is compulsory. More than 40% of absenteeism has obliged the signature. Evaluation is done on the base of oral examination.

Required and recommended readings:



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