

REVIEW

of the educational and professional programme “Business Processes and Operational Efficiency” for second (master’s) level higher education students in the specialty D3 Management at Technical University “Metinvest Polytechnic” LLC

The educational and professional programme “Business Processes and Operational Efficiency” aims to train managers capable of analysing, redesigning and improving the business processes of industrial enterprises and achieving their operational efficiency through strategic, project and process management. For the mining and metallurgical business, where results are driven by costs, equipment productivity and the speed at which change is implemented, this specialisation has direct practical value: enterprises need managers who understand both the company’s strategy and how it translates into the day-to-day work of their units.

The content of the programme is built from management logic to applied tools. The courses “Strategic Management” and “Methodology of Operational Efficiency Management in Industrial Corporate Structures” develop an understanding of how objectives are set, how performance is measured and where losses occur. “Business Process Analysis and Reengineering”, “Digitalisation Solutions in Operational Efficiency Management” and “Budgeting and Evaluation of Change Effectiveness” provide tools for redesigning processes and assessing the economic effect of change, while “Operational Efficiency Improvement Programmes and Projects” teaches students to turn improvement ideas into managed projects with defined timelines, resources and accountability. Industry specifics are covered by the course “Advanced Technologies in the Mining and Metallurgical Complex”, which treats modern metallurgical production technologies as sources of efficiency gains.

Management training is complemented by “Soft Skills in Personnel Performance Management” and professional English for business and academic communication.

In these courses, students master tools that are used at enterprises: overall equipment effectiveness and specific resource consumption indicators, Lean, TPM, Kaizen and Six Sigma, process modelling in BPMN notation, KPI systems and the balanced scorecard, investment project appraisal methods, and work with data from corporate ERP and MES systems in MS Excel and Power BI. It is valuable that these tools are not presented in isolation from one another but within the logic of a specific management task.

This combination of strategic, process and project training makes it possible to prepare managers at different levels: managers of operational improvement projects and programmes, heads of functional and production units, managers responsible for the performance of business units, and consultants on enterprise performance. A graduate is able not only to carry out an analysis but also to justify a management decision, organise a team and bring change to a measurable result.

A key strength of the programme is its close link with business. Specialists from Metinvest Group enterprises are involved in guest lectures and in mentoring during the R&D project and industrial placement. Students complete their industrial placements primarily at Group enterprises, including Promet Steel JSC in Bulgaria. The R&D project, the industrial placement and the qualification thesis are based on materials from real enterprises and are logically linked, so throughout their studies students can work on a single business process and receive feedback from both their university supervisor and their business mentor. The best students have the opportunity to undertake internships at the Group’s foreign assets on a competitive basis.

Comments and suggestions:

1. Students collect data for their qualification theses mainly during the industrial placement, so the obligation to protect restricted information should be set out in the placement programme and formalised at its start, together with rules for anonymising data in reports and publications.

2. Energy efficiency should be singled out as a separate source of operational efficiency. For mining and metallurgical enterprises, specific energy consumption per unit of output is a significant cost driver, so its analysis should be included in individual placement assignments and in qualification thesis topics.

3. Occupational safety indicators should be included in the KPI systems that students develop for improvement projects. A project that raises productivity at the cost of greater risk to personnel would not be approved in production, and a future manager needs to take this into account already at the justification stage.

Overall, the educational and professional programme "Business Processes and Operational Efficiency" meets the needs of mining and metallurgical enterprises, in particular Metinvest Group, for specialists in business process management and operational efficiency, and combines academic training with work on real processes and data. The suggestions above are of a practical nature and do not affect the positive assessment of the programme.

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