

Chapter 5

Work–Integrated Learning for Engineers in Coordination with Industries

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ABSTRACT

This chapter presents the curriculum and training process applied in the IESP department, standing for “Ingénieur d’Exploitation des Systèmes de Production” of the Ecole Polytechnique Universitaire de Lille (Polytech’Lille, F59 Villeneuve d’Ascq, France), with an emphasis upon the WIL training process for Exploitation Engineers of Production Systems. The IESP department is dedicated to lifelong learning and apprenticeship leading to a Master’s degree in Engineering (French Engineer level) in the production field. It is an accredited program. This practice relies upon a background experience of 18 years with close partnerships with industry from many sectors, such as; energy, metallurgy, food industry, automotive, chemical engineering, and aeronautics. The graduates from Continuing Vocational Education and Training (CVT) that are already employed in the company improve their position. Younger graduates from Initial Vocational education and Training (IVT) that also validated their abilities are much more employable. They can work in any industrial sector dealing with engineering production having a strong technical and managerial skill base. In this chapter, the historical setting up and evolution is elaborated in the legal French education framework. The training model based on the IESP professional profile is presented. This model presents an academic curriculum with WBL that integrates a real formative work situation in the industry. The tools and methods developed all along the training process are also focused within a sustainable development policy. Finally, success and difficulties or challenges with mobility due to the globalization of the economy and innovation with respect to the economical crisis are also discussed.

DOI: 10.4018/978-1-60960-547-6.ch005

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