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**CURRICULUM COMPOSITION REQUIREMENTS FOR ENGINEERING
UNDERGRADUATE PROGRAMS: A STUDY BASED ON WASHINGTON
ACCORD ACCREDITATION CRITERIA**

G.L. Fernand¹ and G.N. Samarasekara²

¹Sri Lanka Institute of Information Technology, Sri Lanka

²University of Sri Jayewardenepura, Sri Lanka

ABSTRACT

Washington Accord (WA) forms the mutual recognition agreement dictating accreditation requirements of four-year engineering undergraduate programs. Individual program accreditation for WA requirements has been delegated to signatories representing different countries using country specific accreditation manuals. Accreditation examines multiple criteria such as graduate attributes, quality systems, curriculum structure and composition and faculty. Among these, curriculum is vital since it forms the starting point of program development. By referring to 17 country specific accreditation manuals, this paper aimed to study the curriculum based accreditation criteria to clarify the scope and the magnitude of subjects expected to be taught to the engineering undergraduates. Each country had their unique curriculum requirements. These ranged from mentioning of few subject areas to specific guidelines tightly defining scope by way of listed subjects to be covered, minimum credit weights for each area. Some manual have specified even, further by including additional scope such as industrial training, exposure to professional practice or laboratory exposure. In general, 20%-25% of the total credits were expected to be from mathematics, natural or basic sciences. All manuals required subjects from Engineering sciences and engineering design and those who specified minimum credit requirement expected a minimum in the 35%-65%. Requirements for complementary studies was emphasized by almost all manuals in the range of 10-15%. This outcomes will be useful in developing new curricula and in preparing of accreditation for cross-border programs. Also the scope and credit weightage identified may form a good reference base for other similar accreditation bodies in specifying curriculum composition.

Keywords: accreditation criterion, Washington Accord, curriculum composition, engineering