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DEVELOPMENTS IN FIRST DEGREE COURSES IN ENGINEERING A DISCUSSION DOCUMENT

This Discussion Document considers the educational requirements of degree courses for chartered engineers and incorporated engineers and analyses the kind of teaching which is appropriate for each. It is concluded that quite different courses are necessary for these groups and the Working Party, therefore, propose two distinct types of degree courses, with different educational goals and teaching methods.

The Report builds on suggestions made in EPC3, The Future Pattern of 1st Degree Courses in Engineering, which was widely welcomed. It also contains outlines of comments by students and industrialists.

FOREWORD

The Committee of the Engineering Professors' Conference issued a document in 1991, entitled "The Future Pattern of 1st Degree Courses in Engineering". This is a discussion document, which was widely circulated. Comments received from engineers in higher education and industry generally supported the recommendations in the document and sought more specific guidance on how they might be put into practice. Consequently, a second Working Party was established in 1992 to address these matters and the contribution to this by Professor John Sparkes is gratefully acknowledged.

The Working Party has taken account of views expressed by industry and students, and has consulted widely in academia. The recommendations in this document are concerned with improving the quality of teaching in engineering degree courses, by increasing the emphasis on understanding and transferable skills. Reference is made to recent educational research which is applicable to our problem and summarises appropriate methods of teaching and learning. September courses are proposed for prospective Chartered Engineers and Incorporated Engineers.

Given the current pressures in university engineering departments, many will argue that it will be difficult to maintain standards let alone improve them. This document addresses this challenge; I commend it to you without reserve.

Professor Graham Ellison

EPC Chairman

1991-1993

Summary

The aim of these proposals is to suggest ways in which the education component of the 'formation' of quality graduates in engineering might be improved.

Two kinds of degree are envisaged by the EPC:

 (i) the BEng (or MEng) degree -for those aiming for CEng recognition. BEng graduates can be expected to tackle successfully. and take responsibility for. new and unspecified problems as they arise; so the degree emphasises