

1. Record Nr.	UNINA9910973277403321
Titolo	Engineering infrastructure diagramming and modeling / / Panel on Engineering Infrastructure Diagramming and Modeling, Committee on the Education and Utilization of the Engineer, Commission on Engineering and Technical Systems, National Research Council
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1986
ISBN	9780585143684 9786610222124 9781280222122 1280222123 9780309595612 0309595614 9780585143682 0585143684
Edizione	[1st ed.]
Descrizione fisica	1 online resource (155 p.)
Collana	Engineering education and practice in the United States
Disciplina	331.7/62/000973
Soggetti	Engineers - United States Engineering - United States
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographies.
Nota di contenuto	Engineering Infrastructure Diagramming and Modeling -- Copyright -- Preface and Acknowledgments -- Contents -- Executive Summary -- INTRODUCTION -- FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS -- Engineering and the Engineering Community -- Definitions: Engineers, Engineering, and the Engineering Community -- Forces Affecting the Engineering Community -- Diagramming and Modeling -- Data Bases -- 1 Definition of Engineering -- INTRODUCTION -- DEFINITIONS -- 2 Forces Affecting the Engineering Community -- EXTERNAL INFLUENCES -- Supply of and Demand for Engineering Students and Graduates -- Government Policies -- Industrial and Private Business Practices -- Societal Conditions -- Responses to Change -- INTERNAL FACTORS -- TECHNOLOGY AS A DRIVING FORCE FOR CHANGE -- EXPECTED IMPACT OF ADVANCES IN ENGINEERING AND

TECHNOLOGY -- 3 Flow Diagrams of the Engineering Community -- INTRODUCTION -- DESCRIPTION OF THE DIAGRAMS -- Basic Flow Diagram -- Comprehensive Flow Diagram -- Detailed Flow Diagrams -- Disaggregated Flow Diagram -- THE BALANCE EQUATION -- DATA AVAILABILITY -- MAJOR DRIVING FORCES -- Demand-Side Forces -- Supply-Side Forces -- LIMITATIONS OF THE FLOW DIAGRAMS -- Part-Time Students -- Internal Training Programs -- Mobility -- NOTES -- 4 Modeling -- NEED FOR AND USE OF MODELS -- CRITIQUE OF EXISTING MODELS -- DEVELOPING THE CEUE SIMULATION MODEL -- Model Objectives -- Program Features -- RESULTS, SELF-CRITIQUE, AND LIKELY EXTENSIONS -- NOTES -- 5 Data Bases -- OVERVIEW OF DATA BASES -- Data Base Manager -- Data Collection Methods -- Respondents -- Target Population -- Focus -- Frequency -- Time Period Covered -- Availability -- DATA BASE COVERAGE -- Personal Variables -- Education -- Employment -- TECHNICAL CHARACTERISTICS -- Sampling Frame -- Sampling Procedures -- Sample Size and Sampling Fraction -- Response Rate -- Accuracy of Data Base.

Data Compatibility -- CONCLUSIONS AND RECOMMENDATIONS -- NOTES -- Appendixes -- Appendix A The Definition of Engineering and of Engineers in Historical Context -- Engineering -- Engineering Technology -- Appendix B Trends in Engineering Enrollments and Degrees Granted -- ENGINEERING AND TOTAL U.S. ENROLLMENTS AND DEGREES AWARDED -- RECENT TRENDS BY SEX AND ETHNICITY -- ENGINEERING TECHNOLOGY AND INDUSTRIAL TECHNOLOGY TRENDS -- FACTORS INFLUENCING ENGINEERING ENROLLMENT TRENDS -- FUTURE DIRECTIONS -- Appendix C Flow Diagrams -- GLOSSARY OF TERMS USED IN COMPREHENSIVE FLOW DIAGRAM -- LABELING SYSTEM FOR FLOW DIAGRAMS -- DETAILED FLOW DIAGRAMS.

---