

MEBS6016 Energy Performance of Buildings

<http://me.hku.hk/bse/MEBS6016/>

Summary of Teaching (Dr. Sam C. M. Hui)

<p>1. Introduction</p> <p>1.1 Course Overview</p> <p>1.2 Energy Basics</p> <p>1.3 Energy Use in Buildings</p> <p>1.4 Energy Efficiency</p> <p>2. Energy Efficiency in Buildings (I)</p> <p>2.1 Energy Policy and Codes</p> <p>2.2 Current Situation in HK</p> <p>2.3 Assessment of Performance</p> <p>2.4 EU Directive on Energy Performance of Bldgs.</p> <p>2.5 Implications for HK</p> <p>3. Energy Efficiency in Buildings (II)</p> <p>3.1 Basic Principles</p> <p>3.2 Building Energy Design</p> <p>3.3 Building Operation and Energy Management</p> <p>3.4 Energy Performance Contracting</p> <p>4. Energy Information Systems</p> <p>4.1 Energy Information System</p> <p>4.2 Data Analysis Techniques</p> <p>4.3 Practical Applications</p> <p>5. Energy Auditing of Buildings</p> <p>5.1 Basic Concepts</p> <p>5.2 Types of Energy Audits</p> <p>5.3 Planning of Energy Audits</p> <p>5.4 Energy Audit Process</p> <p>5.5 Energy Audit Report</p> <p>5.6 Energy Management Opportunities</p> <p>5.7 Implementation Issues</p>	<p>6. Economic and Financial Analysis</p> <p>6.1 Investment Appraisal</p> <p>6.2 Financing Options</p> <p>6.3 Building Economic Analysis</p> <p>6.4 Whole Life Costing</p> <p>7. Energy Efficient Technologies</p> <p>7.1 Building Envelope</p> <p>7.2 HVAC</p> <p>7.3 Hot Water</p> <p>7.4 Lighting</p> <p>7.5 Electrical Services</p> <p>7.6 Lifts & Escalators</p> <p>7.7 Building Management System</p> <p>8. Building Energy Standards and Codes</p> <p>8.1 ASHRAE 90.1</p> <p>8.2 Structure and Scope</p> <p>8.3 Compliance Options</p> <p>8.4 Energy Cost Budget Method</p> <p>8.5 Performance Rating Method</p> <p>8.6 Hong Kong BEC</p> <p>9. Building Energy Simulation</p> <p>9.1 Building Energy Simulation</p> <p>9.2 Simulation Tools</p> <p>9.3 Applying Simulation</p> <p>9.4 Modelling Process</p> <p>9.5 Simulation Skills</p>
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Concept Map:

