

Training calendar and Agenda

Name of the training agency	Ela Green Building Consultants
Zone	2
Name of the contact person	<i>Abel Mathews</i>
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Training Calendar

Training A

Batch	Date
Batch 1	20-09-2021 to 25-09-2021 Morning Batch
Batch 2	20-09-2021 to 26-09-2021 Evening Batch
Batch 3	27-09-2021 to 04-10-2021 Morning Batch
Batch 4	04-10-2021 to 09-10-2021 Morning Batch
Batch 5	04-10-2021 to 10-10-2021 Evening Batch
Batch 6	18-10-2021 to 23-10-2021 Morning Batch
Batch 7	18-10-2021 to 24-10-2021 Evening Batch
Batch 8	25-10-2021 to 31-10-2021 Evening Batch
Batch 9	01-11-2021 to 08-11-2021 Morning Batch
Batch 10	08-11-2021 to 13-11-2021 Morning Batch
Batch 11	08-11-2021 to 14-11-2021 Evening Batch
Batch 12	15-11-2021 to 21-11-2021 Evening batch
Batch 13	22-11-2021 to 27-11-2021 Morning Batch
Batch 14	22-11-2021 to 28-11-2021 Morning Batch

Training B

Batch	Date
Batch 1	12-10-2021 to 17-10-2021 Evening Batch
Batch 2	<i>15-11-2021 to 18-11-2021 Morning Batch</i>

Annexure

(Attach the detailed training calendar and agenda as annexure)

TENTATIVE AGENDA
TRAINING A - 6 DAYS PROGRAM

Online Certificate Course on ECBC compliance check through EnergySimulation					
Timing	Session no.	Session title	Duration(mins)	Hrs	Total Hrs
DAY 1					
10.00 - 10.15	1.1	Participants Confirmation	15	0.25	4
10.15 - 10.30	1.2	Introduction speech	15	0.25	
10.30 - 10.45	1.3	Key note address	15	0.25	
10.45 - 11.15	1.4	ECBC- A Brief on ECBC and Kerala State ECBC Rules 2017	30	0.5	
11.15 - 12.15	1.5	Understanding Building Physics	60	1	
15.00 - 15.45	2.1	Introduction on ECBC &Compliance Approach • Mandatory Requirements • Prescriptive Approach • Whole Building Performance Approach	45	0.75	
15.45 - 17.00	2.2	Case Study ECBC Compliant Building with Cost Analysis	60	1	
DAY 2					
10.00 - 10.15	3.1	Participants Confirmation	15	0.25	4
10.15 - 10.45	3.2	Technical Aspects of ECBC	30	0.5	
10.45- 11.30	3.3	Building Physics, U-Value Calculation	45	0.75	
11.30 - 12.15	3.4	Building Design, Form, Zoning & Orientation Optimization	45	0.75	
15.00 - 16.00	4.1	Daylighting Analysis - Shading, Daylighting, Glass Selection	60	1	
16.00 - 16.45	4.2	Case Study – Presentation	45	0.75	
DAY 3					
10.00 - 10.15	5.1	Participants Confirmation	15	0.25	4.75
10.15 - 11.00	5.2	Introduction to Energy Modelling	45	0.75	
11.00 - 11.45	5.3	Demonstrations on Tools Interface	45	0.75	
11.45 - 12.15	5.4	Presentation of Case Study	30	0.5	
15.00 - 16.30	6.1	Hands-on Training for Sample Energy Model: • Building Geometry Development	90	1.5	
16.30 - 17.30	6.2	Optimization of Building Envelope (<i>Zoning, Insulation, Shading Devices, and their Impact on Building Energy-Load Calculation</i>)	60	1	
DAY 4					
10.00 - 10.15	7.1	Participants Confirmation	15	0.25	4
10.15 - 11.00	7.2	HVAC System Sizing	45	0.75	
11.00 - 12.00	7.3	Modelling of Different Systems	60	1	
12.00 - 12.30	8.1	Simulation of Developed Model	30	0.5	
15.00 - 16.30	8.2	Simulation-Output Analysis	90	1.5	
DAY 5					
10.00 - 10.15	9.1	Participants Confirmation	15	0.25	4.75
10.15 - 11.45	9.2	Hands-on Training Exercise Problem • Base case modelling as per KSECBC Rules (ECBC 2007 Guide) – Notified in the State	90	1.5	
11.45 - 13.15	9.3	Hands-on Training Exercise Problem Proposed Case as per Sample Exercise Shared • Proposed Case Modelling as per the exercise given.	90	1.5	
15.00 - 16.30	10.1	Hands-on Training- Exercise Problem EPI evaluation and comparison of Base Case and Proposed Case Models-(Specific Building Type from the Code)	90	1.5	
DAY 6					
		EXAMINATION			6
9.30 - 10.30	1	ECBC Examination for Participants – Multiple Choice Questions type.	60	1	
11.00 - 17.00	2	Simulation Examination for a sample energy model of typical building type– With the Building Descriptions shared with participants	300	5	
	Total course duration				27.50

Timing	Session no.	Session title	Duration(mins)
DAY 1			
10.00 - 10.15		Participants Confirmation	15
10.15 - 10.30		Introduction speech	15
11.00 - 12.00	Module 1	ECBC Awareness & Overview	
		World Energy Scenario & Energy scenario in India	15
		About ECO-III Project, Milestones, EC Act,	10
		Introduction to ECBC	15
		Impact of ECBC Compliance	10
		Q & A Session	10
12.00 - 13.10	Module 2	ECBC Scope & Administration	
		ECBC Scope, Applicability	10
		ECBC Compliance approach KSECBC Rules 2017	10
		ECBC Compliance Process in Kerala	15
		Administration and Enforcement	10
		ECBC Documents in force	15
		Q & A Session	10
		Assignment: ECBC Compliance check building permit documentation	
14.10 -15.40	Module 3	Envelope Design Considerations	
		Design & details of opaque construction, Fenestration, Shading devise, cool roofs	30
		Heat transfer principles - Material Properties - Moisture & Infiltration – Design methods Calculations	30
		Code requirements – Mandatory & Prescriptive- ECBC Compliance forms	15
		Q & A Session	15
		Assignment: Calculation of thermal property of Construction materials /U-Value	
DAY 2			
10.45 - 11.00		Participants Confirmation	15
11.00 - 13.00	Module 4	Heating Ventilation & Air-Conditioning – basics ECBC	
		Whole building design approach and role of HVAC	15
		Refrigerative cooling, system types and details	25
		HVAC System components &Efficiency	25
		Cooling load reduction	15
		System Balancing & Building Commissioning overview	10
		Mandatory & Prescriptive- ECBC Compliance forms	15
		Q & A Session	15
		Assignment: HVAC modelling in Simulation tool for a sample system	
14.00 - 15.30	Module 5	Lighting Basics	
		Lighting Principles, Light Quality optimisation	20
		Energy Efficient Lighting Systems	15
		Lighting control design, BAM, SFM	15
		Whole building approach, Concept of LPD	10
		Mandatory & Prescriptive -ECBC Compliance forms	15
		Q & A Session	15
		Assignment: LPD calculations (Manual and Simulation tool based)	
DAY 3			
10.45 - 11.00		Participants Confirmation	15
11.00 - 12.30	Module 6	Daylighting Analysis	
		Significance of Daylighting Analysis, DEF, Surface Reflectance, UDI Code Requirements	20
		Daylighting Analysis Simulation Method	55
		Q & A Session	15
		Assignment: Daylighting factor calculation (based on Prescribed ECBC Methods)	
12.30 - 13.10	Module 7	Electrical Power	
		Power Distribution, Transformers, Electric Motors	10
		Types- selection criteria- Sizing	10
		Losses- PF & PFC- Efficiency	10
		Mandatory & Prescriptive- ECBC Compliance forms	10
14.10 - 15.00		Service Hot Water & Pumping – basics	
		Types of water heaters - Source type and system details	10
		Solar water heater sizing- Efficiency- Supplementary water heating	10
		Energy loss- piping Insulation- heat traps	10
		Mandatory & Prescriptive- ECBC Compliance forms	10
		Q & A Session	10
		Assignment: Modelling Service hot water systems in simulation tool (for a sample building)	
15.00- 16.30	Module 8	Hands-on Compliance Check	
		Prescriptive requirements	50
		Trade- off compliance	30
		Q & A Session	15
		Assignment: Prescriptive analysis method for a hypothetical project	
DAY 4			
9.45 - 10.00		Participants Confirmation	15
10.00 - 13.25	Module 9	Hands-on Compliance Check	
		Whole Building Performance using software	150
		Q & A Session	60
		Assignment: Whole building analysis method for a sample project	
14.30 - 15.30	Module 10	Report Generation &Assessments	
		Guidance on Report Generation as per the ECBC	30
		Assessment on ECBC Compliance	30
		Assignment: Report generation for a Pre-modelled sample project.	
		Total Course Duration	960 hrs
		Total Course Duration in Hours	16 hrs.

TENTATIVE AGENDA
TRAINING B - 4 DAYS PROGRAM
Intensive training on ECBC compliance check

TENTATIVE AGENDA - Working Professionals
TRAINING A - 7 DAYS PROGRAM

Online Certificate Course on ECBC compliance check through EnergySimulation					
Timing	Session no.	Session title	Duration(mins)	Hrs	Total Hrs
DAY 1					
16.30 - 16.45	1.1	Participants Confirmation	15	0.25	3.75
16.45 - 17.00	1.2	Introduction speech	15	0.25	
17.00 - 17.30	1.1	ECBC- A Brief on ECBC and Kerala State ECBC Rules 2017	30	0.5	
17.30 - 18.30	1.2	Understanding Building Physics	60	1	
19.15 - 20.00	2	Introduction on ECBC &Compliance Approach	45	0.75	
		• Mandatory Requirements			
		• Prescriptive Approach			
20.00 - 21.00	2.2	• Whole Building Performance Approach	60	1	
		Case Study ECBC Compliant Building with Cost Analysis			
DAY 2					
16.30 - 16.45	3.1	Participants Confirmation	15	0.25	3.75
16.45 - 17.15	3.2	Technical Aspects of ECBC	30	0.5	
17.15 - 18.00	3.3	Building Physics, U-Value Calculation	45	0.75	
18.00 - 18.45	3.34	Building Design, Form, Zoning & Orientation Optimization	45	0.75	
19.30 - 20.30	4.1	Daylighting Analysis - Shading, Daylighting, Glass Selection	60	1	
20.30 - 21.00	4.2	Case Study – Presentation	30	0.5	
DAY 3					
16.30 - 16.45	5.1	Participants Confirmation	15	0.25	3.75
16.45 - 17.30	5.2	Introduction to Energy Modelling	45	0.75	
17.30 - 18.15	5.3	Demonstrations on Tools Interface	45	0.75	
18.15 - 18.45	5.4	Presentation of Case Study	30	0.5	
19.30 - 21.00	6.1	Hands-on Training for Sample Energy Model:	90	1.5	
		• Building Geometry Development			
DAY 4					
16.30 - 16.45	7.1	Participants Confirmation	15	0.25	3.25
16.45 - 17.30	7.2	Optimization of Building Envelope (<i>Zoning, Insulation, Shading Devices, and their Impact on Building Energy-Load Calculation</i>)	45	0.75	
17.30 - 18.15	7.3	HVAC System Sizing	45	0.75	
19.15 - 20.15	8.1	Modelling of Different Systems	60	1	
20.15 - 20.45	8.2	Simulation of Developed Model	30	0.5	
DAY 5					
16.30 - 16.45	9.1	Participants Confirmation	15	0.25	3.25
16.45 - 18.15	9.2	Simulation-Output Analysis	90	1.5	
19.15 - 20.45	10.1	Hands-on Training Exercise Problem	90	1.5	
		• Base case modelling as per KSECBC Rules (ECBC 2007 Guide) – Notified in the State			
DAY 6					
16.30 - 16.45	11.1	Participants Confirmation	15	0.25	3.25
16.45 - 18.15	11.2	Hands-on Training Exercise Problem Proposed Case as per Sample Exercise Shared	90	1.5	
		• Proposed Case Modelling as per the exercise given.			
19.15 - 20.45	12.1	Hands-on Training- Exercise Problem	90	1.5	
		EPI evaluation and comparison of Base Case and Proposed Case Models-(Specific Building Type from the Code)			
DAY 7					
	Sunday				
		EXAMINATION			
9.30 - 10.30	1	ECBC Examination for Participants – Multiple Choice Questions type.	60	1	6
11.00 - 17.00	2	Simulation Examination for a sample energy model of typical building type– With the Building Descriptions shared with participants	300	5	
	Total course duration				27.00

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16.45 - 17.00		Introduction speech	15
17.00 - 18.00	Module 1	ECBC Awareness & Overview	
		World Energy Scenario & Energy scenario in India	15
		About ECO-III Project, Milestones, EC Act,	10
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		Impact of ECBC Compliance	10
		Q & A Session	10
18.30 - 19.40	Module 2	ECBC Scope & Administration	
		ECBC Scope, Applicability	10
		ECBC Compliance approach KSECBC Rules 2017	10
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		Administration and Enforcement	10
		ECBC Documents in force	15
		Q & A Session	10
		Assignment: ECBC Compliance check building permit documentation	
19.40 - 21.10	Module 3	Envelope Design Considerations	
		Design & details of opaque construction, Fenestration, Shading devise, cool roofs	30
		Heat transfer principles - Material Properties - Moisture & Infiltration – Design methods Calculations	30
		Code requirements – Mandatory & Prescriptive- ECBC Compliance forms	15
		Q & A Session	15
		Assignment: Calculation of thermal property of Construction materials /U-Value calculation for a sample building	
DAY 2			
16.30 - 16.45		Participants Confirmation	15
16.45 - 18.00	Module 4	Heating Ventilation & Air-Conditioning – basics ECBC	
		Whole building design approach and role of HVAC	15
		Refrigerative cooling, system types and details	25
		HVAC System components &Efficiency	25
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		Mandatory & Prescriptive- ECBC Compliance forms	15
		Q & A Session	15
		Assignment: HVAC modelling in Simulation tool for a sample system	
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		Lighting Principles, Light Quality optimisation	20
		Energy Efficient Lighting Systems	15
		Lighting control design, BAM, SFM	15
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		Mandatory & Prescriptive -ECBC Compliance forms	15
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DAY 3			
16.30 - 16.45		Participants Confirmation	15
16.45 - 18.00	Module 6	Daylighting Analysis	
		Significance of Daylighting Analysis, DEF, Surface Reflectance, UDI Code Requirements	20
		Daylighting Analysis Simulation Method	55
		Q & A Session	15
18.30 - 18.45		Assignment: Daylighting factor calculation (based on Prescribed ECBC Methods)	
18.45 - 20.15	Module 7	Electrical Power	
		Power Distribution, Transformers, Electric Motors	10
		Types- selection criteria- Sizing	10
		Losses- PF & PFC- Efficiency	10
		Mandatory & Prescriptive- ECBC Compliance forms	10
		Service Hot Water & Pumping – basics	
		Types of water heaters - Source type and system details	10
		Solar water heater sizing- Efficiency- Supplementary water heating	10
		Energy loss- piping Insulation- heat traps	10
		Mandatory & Prescriptive- ECBC Compliance forms	10
		Q & A Session	10
		Assignment: Modelling Service hot water systems in simulation tool (for a sample building)	
20.15 - 21.15	Module 8	Hands-on Compliance Check	
		Prescriptive requirements	50
		Trade- off compliance	30
		Q & A Session	15
		Assignment: Prescriptive analysis method for a hypothetical project	
DAY 4	Sunday		
10.00 - 13.25	Module 9	Hands-on Compliance Check	
		Whole Building Performance using software	150
		Q & A Session	60
		Assignment: Whole building analysis method for a sample project	
14.30 - 15.30	Module 10	Report Generation &Assessments	
		Guidance on Report Generation as per the ECBC	30
		Assessment on ECBC Compliance	30
		Assignment: Report generation for a Pre-modelled sample project.	
		Total Course Duration	960 hrs
		Total Course Duration in Hours	16 hrs.

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TRAINING B - 4 DAYS PROGRAM
Intensive training on ECBC compliance check