#### TRAINING COURSES

#### CONTENT OF VARIOUS PROGRAMMES

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#### PRODUCTION OF COMPRESSED STABILISED EARTH BLOCKS

One-week regular programme: 3 to 4 times a year

- 6 days course with 4 sessions daily from 9.00 AM to 4.30 PM
- Video and slide show on earth architecture in the world
- Building with earth in Auroville and particular earth techniques (Slide show)
- Sustainability and environmental friendliness and management of resources (Slide show)
- Basic data on CSEB Raw material
- Soil identification (field tests) and improvement principles
- Soil stabilization principles and calculation
- Block yard organisation Quality control principles
- Cost analysis & economic feasibility study
- Production of compressed stabilised earth blocks (plain, interlocking and special)

Eligibility: architects or engineers, technicians or supervisors, masons or students

Minimum 15 people – Maximum 30 people

## THEORY OF ARCHES, VAULTS AND DOMES (AVD) One-week regular programme: 3 times a year

6 days course with 6 sessions daily from 8.30 AM to 7.30 PM

- Introduction, terminology, typology, diversity of AVD (Slide show)
- Various details about AVD and basic structural principles,
- Stability study with the catenary method
- Stability study with the funicular method
- Stability study with the optimisation method
- Stability study of basic shapes
- 8 case studies with slide shows
- Designing AVD with the optimisation method

Eligibility: architects or engineers, technicians, students

Minimum 15 people – Maximum 30 people

#### PRODUCTION AND USE OF CSEB

#### One-week intensive regular programme: 2 to 3 times a year

6 days course with 6 sessions daily from 8.30 AM to 7.30 PM

- Video and slide show on earth architecture in the world
- Building with earth in Auroville and particular earth techniques (Slide show)
- Sustainability and environmental friendliness and management of resources (Slide show)
- Basic data on CSEB Raw material
- Soil identification (field tests) and improvement principles
- Soil stabilization principles and calculation
- Block yard organisation Quality control principles
- Cost analysis & economic feasibility study
- Production of compressed stabilised earth blocks (plain and special)
- Ramming a stabilized rammed earth foundation and wall
- Mortar quality, block-laying & design guidelines
- Building composite columns, lintels and beams with U blocks
- Building a composite plinth beam with U blocks
- Building with arches, vaults and domes (Slide show and practical exercises)

Eligibility: architects or engineers, technicians or supervisors, masons or students

Minimum 15 people – Maximum 30 people

### MASONRY WITH COMPRESSED STABILISED EARTH BLOCKS

One-week regular programme: 3 to 4 times a year 6 days course with 4 sessions daily from 9.00 AM to 4.30 PM

- Particular earth techniques (Slide show)
- Soil identification Tests for mortar Mortar quality
- Bonds and design guidelines for CSEB
- Building a basement, a plinth beam with U blocks and casting the plinth beam
- Building interlocking walls
- Building composite columns, lintels and beams with U blocks
- Introduction to stabilised rammed earth foundations
- Introduction to stabilised rammed earth walls
- Introduction for building arches, vaults and domes (Slide show and practical exercises)

Eligibility: architects or engineers, technicians or supervisors, masons or students

Minimum 15 people – Maximum 30 people

#### BUILDING ARCHES, VAULTS AND DOMES (AVD) One-week regular programme: 3 times a year

6 days course with 5 sessions daily from 8.30 AM to 7.30 PM

- Principles for building AVD (Slide show) Mortar quality
- Building various typical arches of various span with centring

(Bucket, Catenary, Corbelled, Pointed, Segmental, Semicircular)

- Building various typical vaults without centring
- (catenary, segmental, semicircular)
- Building various typical domes of 1.5 m span without centring

(conical, cloister dome, on squinches, hemispherical, pointed, segmental)

- Visit of building site with AVD construction

Eligibility: architects or engineers, technicians or supervisors, masons or students

Minimum 15 people – Maximum 30 people

#### PRODUCTION AND USE OF CSEB FOR EARTHQUAKE RESISTANCE One-week intensive programme (scheduled upon request)

6 days course with 6 sessions daily from 8.30 AM to 6.00 PM

- Video and slide show on earth architecture in the world
- Building with earth in Auroville and particular earth techniques (Slide show)
- Sustainability and environmental friendliness and management of resources (Slide show)
- Basic data on CSEB Raw material
- Soil identification and improvement principles Soil stabilization principles and calculation
- Mortar quality and tests for mortar Block laying & design guidelines for conventional buildings
- Earthquake effects on buildings (Slides) Design guidelines for earthquake resistance
- Block yard organisation and quality control principles
- Production of compressed stabilised earth blocks (plain and special)
- Production of hollow interlocking compressed stabilised earth blocks (245 & 295 of various sizes)
- Introduction to stabilised rammed earth foundations Introduction to stabilised rammed earth walls
- Building a plinth with plain and interlocking blocks Casting a RCC plinth beam
- Building interlocking walls 245 and 295
- Pre-casting composite lintels (Single height and double height)
- Cost analysis & economic feasibility study
- Case study on the earthquake resistant AUM house (Slide show)

Eligibility: architects or engineers, technicians or supervisors, masons or students

Minimum 15 people – Maximum 30 people

### PRODUCTION OF CSEB FOR EARTHQUAKE RESISTANCE

One-week programme (scheduled upon request)

6 days course with 6 sessions daily from 8.30 AM to 6.00 PM

- Video and slide show on earth architecture in the world
- Building with earth in Auroville and particular earth techniques (Slide show)
- Sustainability and environmental friendliness and management of resources (Slide show)
- Basic data on CSEB Raw material
- Soil identification (field tests) and improvement principles
- Soil stabilization principles and calculation
- Blockyard organisation Quality control principles
- Cost analysis & economic feasibility study
- Production of compressed stabilised earth blocks (plain and special)
- Production of hollow interlocking compressed stabilised earth blocks

(245 & 295 of various sizes & U blocks)

Eligibility: architects or engineers, technicians or supervisors, masons or students

Minimum 15 people - Maximum 30 people

#### AWARENESS PROGRAMME ON EARTH ARCHITECTURE Two-day awareness programme (scheduled upon request)

Course with 4 sessions daily from 9.00 AM to 4.30 PM

- Earth architecture (DVD)
- Diversity and universality of earth architecture (Slide show on earth architecture in the world)
- Sustainability and environmental friendliness Management of resources (Slide show and lecture)
- Basic data on CSEB Raw material (lecture)
- Building with earth in Auroville (Slide show) Particular earth techniques (Slide show)
- Sensitive analysis of soils (practical)
- Production of compressed stabilised earth blocks (practical)
- Ramming a stabilised rammed earth wall (practical)
- Building with arches, vaults and domes (Slide show and practical exercises)

Eligibility: Students of all ages, students of architecture or professionals

Minimum 15 people – Maximum 30 people

# AWARENESS PROGRAMME ON EARTH ARCHITECTURE One and a half-day awareness programme (scheduled upon request)

Course with 4 sessions the first day from 9.00 AM to 4.30 PM and 2 the second day morning

- Earth architecture (DVD)
- Diversity and universality of earth architecture (Slide show on earth architecture in the world)
- Sustainability and environmental friendliness (lecture)
- Building with earth in Auroville (Slide show) Particular earth techniques (Slide show)
- Sensitive analysis of soils (practical)
- Production of compressed stabilised earth blocks (practical)
- Building arches (practical)

Eligibility: Students of all ages, students of architecture or professionals

Minimum 15 people - Maximum 30 people

#### AWARENESS PROGRAMME ON EARTH ARCHITECTURE One-day awareness programme (scheduled upon request)

Course with 4 sessions from 9.00 AM to 4.30 PM

- Earth architecture (DVD)
- Diversity and universality of earth architecture (Slide show on earth architecture in the world)
- Sustainability and environmental friendliness Building with earth in Auroville (Slide show)
- Particular earth techniques and building with arches, vaults and domes (2 Slide shows)
- Production of CSEB (practical)

Eligibility: Students of all ages, students of architecture or professionals

Minimum 15 people – Maximum 30 people

#### MASONRY WITH CSEB FOR EARTHQUAKE RESISTANCE One-week programme (scheduled upon request)

6 days course with 6 sessions daily from 8.30 AM to 6.00 PM

- Earthquake effects on buildings (Slide show)
- Basic design guidelines for CSEB Basic design guidelines for earthquake resistance
- Design guidelines with interlocking blocks
- 2 Case studies on earthquake resistant houses with CSEB (Slide shows)
- Ramming stabilised rammed earth foundations
- Building a plinth with hollow interlocking blocks
- Casting a RCC plinth beam in U blocks (hollow interlocking)
- Building interlocking walls 245
- Building composite columns 240 and 290
- Pre-casting composite lintels (Single height and double height)
- Introduction to building arches vaults and domes (Slides show)
- Building arches

Eligibility: architects or engineers, technicians or supervisors, masons or students

Minimum 15 people – Maximum 30 people

## AWARENESS PROGRAMME ON EARTH ARCHITECTURE Two-day awareness programme for children (scheduled upon request)

Course with 4 sessions daily from 9.00 AM to 4.30 PM

- Earth architecture (DVD)
- Diversity and universality of earth architecture (Slide show on earth architecture in the world)
- Sustainability and environmental friendliness Management of resources (Slide show and lecture)
- Building with earth in Auroville (Slide show)
- Sensitive analysis of soils (practical)
- Production of compressed stabilised earth blocks (practical)
- Building arches (practical)

Eligibility: Students below 15 years old

Minimum 15 people - Maximum 30 people

### AWARENESS PROGRAMME ON EARTH ARCHITECTURE

#### One and a half-day awareness programme for children (scheduled upon request)

Course with 4 sessions the first day from 9.00 AM to 4.30 PM and 2 the second day morning

- Earth architecture (DVD)
- Diversity and universality of earth architecture (Slide show on earth architecture in the world)
- Sustainability and environmental friendliness (lecture)
- Building with earth in Auroville (Slide show) Management of resources (Slide show and lecture)
- Sensitive analysis of soils (practical)
- Production of compressed stabilised earth blocks (practical)
- Building arches (practical)

Eligibility: Students below 15 years old

Minimum 15 people - Maximum 30 people

## AWARENESS PROGRAMME ON EARTH ARCHITECTURE One-day awareness programme for children (scheduled upon request)

Course with 4 sessions from 9.00 AM to 4.30 PM

- Earth architecture (DVD)
- Diversity and universality of earth architecture (Slide show on earth architecture in the world)
- Sustainability and environmental friendliness Building with earth in Auroville (Slide show)
- Production of CSEB (practical)
- Building with arches (practical)

Eligibility: Students below 15 years old

Minimum 15 people – Maximum 30 people

# AWARENESS PROGRAMME ON EARTH ARCHITECTURE Half-day awareness programme (scheduled upon request)

Course with 3 sessions in the morning from 9.00 AM to 12.30 PM

- Video and slide show on earth architecture in the world
- Building with earth in Auroville and particular earth techniques (Slide show)
- Sustainability and environmental friendliness and management of resources (lecture)
- Production of compressed earth blocks (practical)

Eligibility: Students of all ages, students of architecture or professionals

Minimum 15 people – Maximum 30 people

# AWARENESS PROGRAMME ON EARTH ARCHITECTURE Half-day awareness programme for children (scheduled upon request)

Course with 3 sessions in the morning from 9.00 AM to 12.30 PM

- Diversity and universality of earth architecture (DVD on earth architecture in the world)
- Sustainability and environmental friendliness Building with earth in Auroville (Slide show)
- Sensitive analysis of soils (practical)
- Production of compressed stabilised earth blocks (practical)
- Building arches (practical)

Eligibility: Students below 15 years old

Minimum 15 people - Maximum 30 people