

Goal:
Curriculum Development

Types of activities:

Development of a new curriculum on low-cost wastewater treatment; preparation of course literature and teaching materials; and delivery to postgraduate students

Duration: 36 months

Objectives:

- Develop a teaching curriculum for new courses on low-cost wastewater treatment for MSc level students in Europe and Asia
- Strengthen and enlarge existing partnership between partner institutions

Project development:

2006: Develop curriculum

2007: Improve and finalize curriculum – prepare teaching materials and implementation of curriculum

2008: Implement curriculum



Coordinator

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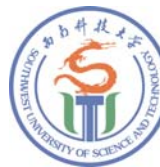


Partners

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Development of Teaching and Training Modules for Higher Education on Low-Cost Wastewater Treatment
Contract VN/Asia-Link/12 (113128)



November 2005 – November 2008

**Belgium,
Denmark, China, and
Vietnam**

Deliver training

Trainings of Vietnamese and Chinese teachers in China (July, 2007) and Europe (September, 2007)

Curriculum dissemination

dissemination of the English, Vietnamese, French and Chinese versions of the curriculum in national institutions

Curriculum implementation

Time: February to October 2008

Venue: FUSAGx, AU, HUCE and SWUST

Duration: 38 hours of teaching (including exercises) and two days for visiting sites

Audience:

At FUSAGx & UA: Graduate students

At SWUST: Graduate students and undergraduate students majoring in environmental engineering

At HUCE: Graduate students in Environmental Engineering, water supply & sanitation; Lecturers in Environmental Engineering of other Universities

Teachers:

Prof. Dimitri Xanthoulis, FUSAGx

Prof. Hans Brix, UA

Dr. Leu Tho Bach, HUCE

Prof. Tran Hieu Nhue, HUCE

Prof. Tran Duc Ha, HUCE

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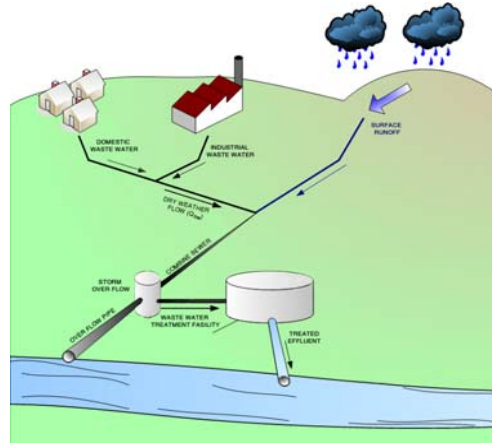
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Curriculum content

1. INTRODUCTION – GENERAL CONSIDERATION



2. DEFINITION OF LOW-COST TREATMENT SYSTEMS

3. COLLECTIVE PRE-TREATMENT REQUIREMENTS

4. COLLECTIVE PROCESSES

Wastewater stabilisation ponds

Wetlands

Intermittent sand filters

Evapotranspirative systems

Anaerobic processes



5. COLLECTIVE COMPLEMENTARY PROCESSES

Epuvalisation

Sand filters as complementary treatment

6. INDIVIDUAL PROCESSES AND TECHNOLOGIES

7. EXTENSIVE TECHNIQUES FOR SLUDGE TREATMENT

8. REUSE OF TREATED WASTEWATER



9. SLUDGE FOR AGRICULTURAL REUSE



10. FINANCIAL AND ECONOMIC ASPECTS

11. ENVIRONMENTAL IMPACT ASSESSMENT

12. LEGAL AND REGULATORY REQUIREMENTS

13. INSTITUTIONAL ASPECTS