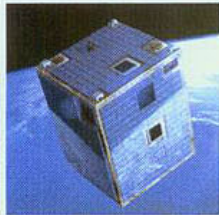


EUROPEAN POSTGRADUATE MASTER IN AEROSPACE DEVELOPMENT SCHEME (EPMA)

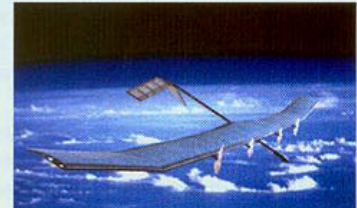
BASED ON A PILOT PROJECT UNDER THE LEONARDO DA VINCI PROGRAMME OF THE EUROPEAN COMMUNITY

## SPACIONIC SYSTEMS DESIGN



### Module EPMA7

26 - 30 November 2007



This module is organized by the Aerospace Division of KHBO,

Faculty of Industrial Sciences and Technology – Oostende (Belgium), in cooperation with VRI

KULeuven, Septentrio, DSPValley, Newtec, QStar, Verhaert, Thales-Alenia, VITO, SLC, FLAG, VLOC

**Aim:** the aim of this module is to explain the technology and design procedures for current and advanced spacionic systems components, together with a special focus on integrated applications such as communication, navigation, observation, power control and data processing.

**Target Delegates:** this module is intended for professionals with a relevant national diploma, engineers and/or managers who wish to expand their understanding of the current status and future trends in spacionic systems design.

**Learning Outcomes:** on completion of this module, delegates will be able to:

- \* understand general space systems dynamics, space and ground components operation,
- \* describe and analyze the basic performance characteristics for individual systems,
- \* formulate the conceptual design steps and related project management procedures,
- \* understand the influence of integrated spacionic systems on reliability, safety and economics of spacecraft systems and subsystems,

**Learning Environment and Pre-Module Study:** the module will include lectures, application examples, video and computer based exercises, industrial visits. Delegates will be assigned a ten- hour preparatory reading of reference literature.

**Module Content:** introduction to space systems , spacionic systems technology, systems reliability, micro-electronic systems design and testing, satellite navigation systems design, spacionic systems project management, small satellite systems design, ground segment communication equipment design, earth observation image processing.

**Post-Module Assignment:** delegates will be given assignment tasks which will involve the application of the knowledge gained during the module, related to their own activities.

**Venue:** KHBO-Aerospace Department, Campus Oostende, Zeedijk 101 Oostende, Belgium

Contact: Mr. R. Defever, Head of KHBO-Aerospace Division/ co-ordinator EPMA-B project,

Tel. 00 32 59 56 90 00 Fax. 00 32 59 56 90 01 E-mail: roland.defever@khbo.be

**Module Cost:** 1050,00 Euro, inclusive of didactical material, coffee-breaks and lunches (accommodation and course dinner (50 Euro) are not included). Max. number of delegates: 16. A company-group-discount is provided. Cancellation/module fee payment: before 22 November 2007.

## KHBO/EPMA7-MODULE: SPACIONIC SYSTEMS DESIGN ( 26 - 30 November 2007 )

### DRAFT MODULE PROGRAMME

#### Monday 26 November

- 14.00 INTRODUCTION TO SPACE SYSTEMS - Dr ir D. Vandepitte KULeuven / PMA  
16.00 SPACE SYSTEMS RELIABILITY – Dr ir G. Deconinck KULeuven /ESAT

#### Tuesday 27 November

- 09.00 ELECTRONICS IN SPACE SYSTEMS - Dr ir P. Simkens, KHBO/ DSP Valley  
11.00 SATELLITE COMMUNICATION SYSTEMS – NEWTEC  
12.30 LUNCH  
14.00 MICRO-ELECTRONIC SYSTEMS DESIGN & TESTING I - PhD H. Manhaeve, QSTAR  
16.00 MICRO-ELECTRONIC SYSTEMS DESIGN & TESTING II - PhD H. Manhaeve, QSTAR  
17.30 ASSIGNMENT TASKS - R. Defever, KHBO

#### Wednesday 28 November

- 09.30 SATELLITE NAVIGATION SYSTEMS DESIGN I - ir. P. Grognard, Septentrio  
11.00 SATELLITE NAVIGATION SYSTEMS DESIGN II - ir. P. Grognard, Septentrio  
12.30 LUNCH  
14.00 SATELLITE NAVIGATION SYSTEMS DESIGN III - ir. P. Grognard, Septentrio  
16.30 ASSIGNMENT TASKS - R. Defever, KHBO

#### Thursday 29 November

- 08.30 DEPARTURE TO VISIT VERHAERT SPACE DIV. - Antwerpen (By car)  
10.00 SATELLITE SYSTEMS DESIGN AND INSTRUMENTATION: THE PROBA CASE  
11.45 GUIDED TOUR OF FACILITIES  
12.15 LUNCH  
13.00 DEPARTURE TO VISIT THALES-ALENIA SPACE DIV. - Antwerpen (By car)  
13.45 GROUND SEGMENT COMMUNICATION EQUIPMENT DESIGN – Thales-Alenia  
15.15 SPACIONIC SYSTEMS PROJECT MANAGEMENT – Thales-Alenia  
16.15 GUIDED TOUR OF FACILITIES

#### Friday 30 November

- 09.30 EARTH OBSERVATION IMAGE PROCESSING I - ir. D. Fransaer, VITO  
11.30 EARTH OBSERVATION IMAGE PROCESSING II - ir. D. Fransaer, VITO  
12.30 LUNCH AT OSTEND-BRUGES INTERNATIONAL AIRPORT  
14.00 EARTH OBSERVATION - THE HALE PROJECT - ir. D. Fransaer, VITO  
15.30 ADVANCED SPACE PROPULSION TECHNOLOGIES – SLC  
17.15 MODULE EVALUATION, ASSIGNMENT TASKS - R. Defever, KHBO

**ENROLMENT:** please complete\* and sign this form and fax it to:

**KHBO – Aerospace / EPMA7 Zeedijk 101 B-8400 Oostende Belgium Fax : 00 32 59 56 90 01**

Yes, I wish to enrol on the KHBO-EPMA7 – Spacionic Systems Design Module

Name: .....

Organisation:..... Function:.....

Address: .....

Tel: ..... Fax: ..... E-mail: .....

Date:

Sign:

\*Before 22 November 2007 - - - After enrolment, you will receive an invoice and more detailed practical information.