IMAGE ANALYSIS, C level

7.5 ECTS credits **IAN850**

Syllabus approved by the Academic board of the School of Information Science, Computer and Electrical Engineering on May 12, 2004.

PLACEMENT IN THE ACADEMIC SYSTEM

The course is optional for students on the Master's programme in Information Technology.

SPECIAL PREREQUISITES AND CONDITIONS FOR ADMISSION

Knowledge in mathematics, programming and computer systems from a Bachelor of Science Programme.

PURPOSE AND OBJECTIVES

The course provides knowledge and practical experience of digital image processing. After completing the course the student should know and be able to use signal representation, colour, and local orientation features as they are related to vision problems including form and texture.

PRIMARY CONTENTS

Image representation. Digitising images. neighborhood operations, point operations, geometrical transforms and interpolation. Linear and non-linear filters. Edge detection. Local orientation and scale. Segmentation. Shape. Classification.

LEARNING AND TEACHING METHODS AND EXAMINATION

Instruction consists of lectures and computer exercises. No written exam is given. For the grade "Passed" presence at computer exercises sessions and approvals of 2/3 of these, are required. Higher grades require further exercises to be completed. These exercises are decided together with the teacher responsible for the course. The course is graded using the ECTS scale.

COURSE EVALUATION

After completion of a course, the Director of Studies is responsible for giving the students the opportunity to participate in course evaluation. The results from the course evaluation will be used for further development and planning of the course. Participation in course evaluation is anonymous. The results are communicated to the director of studies, lab leader, teachers and students. A list of results and proposed measures are reported to the school board.

COURSE LITERATURE

Jähne, Bernd: *Digital Image Processing. Concepts, Algorithms and Scientific Applications*, 4th edition, Springer 1997.

Additional photocopied material.