

**School of Systems Engineering**  
**Assessed Coursework Set Front Page**

**Course code.....SE3IA11 Image Analysis .....**

**Lecturer responsible.....Prof. James Ferryman.....**

**Coursework description: Assignment (Report and Practical Demonstration)**

**Demonstration of work to be given during advertised slot in Week 11.**

**Report for Assignment to be submitted online via Blackboard by  
10.30am on Friday 11th December 2015 (week 11).**

**Work will be marked and feedback returned within 15 working days.**

**This piece of coursework is regarded as MAJOR.**

**NOTES:**

This coursework report should be submitted on-line through Blackboard Learn.

By submitting this work you are certifying that it is all your own work and that use of material from other sources has been properly and fully acknowledged in the text. You are also confirming that you have read and understood the University's Statement of Academic Misconduct, available on the University web-pages.

If your work is submitted after the deadline, 10% of the maximum possible mark will be deducted for each working day (or part of) it is late. A mark of zero will be awarded if your work is submitted more than 5 working days late. You are strongly recommended to submit work by the deadline as a late submission on one piece of work can impact on other work. If you believe that you have a valid reason for failing to meet a deadline then you should complete an Extenuating Circumstances form and submit it to the Student Information Centre before the deadline, or as soon as is practicable afterwards, explaining why.

**MARKING CRITERIA:**

There are two elements in the marking scheme. 60% of the final mark is awarded to the report (see attached report mark sheet) and 40% of the final mark is awarded to the demonstration (see attached demonstration mark sheet).

**University of Reading**  
**School of Systems Engineering**  
**SE3IA11 - Image Analysis**

**13th November 2015**

**Assignment: IMAGE COMPRESSION**

**TASKS:**

- ⌋ The assignment for this module is to be based on an individual project, the purpose of which is to COMPRESS IMAGES.
- ⌋ The challenge is for you to devise and implement ways to reduce the size of natural images to occupy the least amount of storage while preserving quality
- ⌋ You choose the compression technique and programming language (note: you must be able to demonstrate in the lab – see below) You are encouraged to develop as much code as possible (marks will be awarded for effort); if you choose to use some code from elsewhere it must be fully acknowledged – you must not totally rely on other sources.
- ⌋ You need to develop two pieces of code: for compression & decompression. Results should show the original image, details of the compressed output, and the compressed-then-decompressed image.

**REQUIREMENTS:**

1. Individual demonstration of your project (40% of marks)
2. Individual report detailing methods, achievements & code (60% of marks)
  - ⌋ Maximum 6 page report (excluding preamble, appendices, source code) :-
    - What has been done - what theory lay behind it?
      - What has been achieved? Examples.
      - Possible further work.
  - ⌋ Source code - properly documented.

**DEADLINES:**

- ⌋ Demonstration: Week 11 Autumn Term
  - The basic requirement is to demonstrate:  
  
compression/decompression cycle: display original image, save compressed image to memory, read compressed image from memory, display decompressed image; display compression ratio.
  - Alpha sting: extra marks will be awarded if the compressed image can be written to/read from disk, and any other features implemented.
- ⌋ Individual report: 10.30am Friday 11th December (Week 11)

**TEST IMAGES**

- ⌋ Test images and example C/C++ code to read images will be made available. Further details will be given in class and on Blackboard.