Please read the instructions before completing this form

Examination Session		Year	

Unit Code	G049	Unit Title	Numerical modeling using spreadsheets

Centre Number		Centre Name	

Candidate Number		Candidate Name	

Evidence: The candidate's evidence needs to include: a design specification that analyses a suitable problem and describes how they will solve it by numerical modeling; evidence of implementing their solution using suitable entry aids and processing facilities; a record of how they overcame their problems; a specification for testing their spreadsheet, and evidence of the results of these tests; technical documentation that explains how their spreadsheet works, and user documentation that explains how it is used; an evaluation of the effectiveness of their solution and their personal performance.

If work is a re-sit, please tick		Session and Year of previous submission	January/June	**2**	**0**		Please tick to indicate this work has been standardised internally	

Page	A.1 Criteria (0 - 1 - 2 marks)	Comment
	☐ The candidate produces an analysis of a problem that identifies the main user requirements and a design specification that takes account of these requirements and that identifies the numerical processing required and how output will be presented;	
	A.2 Criteria (3 - 4 - 5 marks)	
	☐ The candidate produces an analysis of a problem that fully identifies the user requirements and a design specification that is complete and that provides full details of sources of data, numerical processing required, user aids and how output is to be presented;	
Mark (Max 7)	**A.3 Criteria (6 - 7 marks)**	
	☐ The candidate produces a detailed analysis of a complex problem and user requirements along with a design specification that provides a clear, precise and complete description of a numerical modelling solution to the problem that could be implemented by someone else.	

Page	B(i).1 Criteria (0 - 1 - 2 marks)	Comment
	☐ The candidate implements a numerical modelling spreadsheet solution to a problem;	
	B(i).2 Criteria (3 - 4 - 5 marks)	
	☐ The candidate implements an easy to use numerical modelling spreadsheet solution that solves a problem effectively;	
Mark (Max 7)	**B(i).3 Criteria (6 - 7marks)**	
	☐ The candidate implements a complete, effective, efficient and easy to use numerical modelling spreadsheet solution to a complex problem.	

Page	B(ii).1 Criteria (0 - 1 - 2 marks)	Comment
	☐ The candidate produces a numerical modelling spreadsheet solution that includes data entry, numerical processing and output;	
	B(ii).2 Criteria (3 - 4 - 5 marks)	
	☐ The candidate produces a numerical modelling spreadsheet solution that includes data entry, specialist numerical processing functions, complex spreadsheet facilities and presentation of output;	
Mark (Max 8)	**B(ii).3 Criteria (6 - 7 - 8 marks)**	
	☐ The candidate produces a numerical modelling spreadsheet solution that includes appropriate use of a range of specialist numerical processing functions and complex spreadsheet facilities for data entry, numerical processing and presentation of output.	

Page	C.1 Criteria (0 - 1 - 2 marks)	Comment
	☐ The candidate produces a record of the strategy used to implement the spreadsheet solution, including methods used to overcome problems;	
	C.2 Criteria (3 - 4 marks)	
	☐ The candidate produces a record of the strategy used to implement the spreadsheet solution, the candidate show that the solutions used to overcome problems show an understanding of both the user's needs and the effective use of spreadsheet facilities;	
	C.3 Criteria (5 marks)	
Mark (Max 5)	☐ The candidate produces a record of the strategy used to implement the spreadsheet solution, the candidate use methodical, analytical and critical approaches to overcome problems during implementation; ☐ the candidate's methods will fully address the user's needs and make effective use of spreadsheet facilities.	
Page	**D.1 Criteria (0 - 1 - 2 marks)**	**Comment**
	☐ The candidate produces a basic test specification and provides evidence that it was used to test that the spreadsheet is functional and that the results are accurate;	
	D.2 Criteria (3 - 4 marks)	
	☐ The candidate produces a test specification that includes acceptable and unacceptable input, and expected output, and provides evidence that it was used to adequately test the functionality and accuracy of the spreadsheet solution and that the solution meets the requirements of the design specification;	
	D.3 Criteria (5 - 6 - 7 marks)	
Mark (Max 7)	☐ The candidate produces a detailed test specification which tests all aspects of the solution with a full range of acceptable and unacceptable input, expected output, and any associated error messages; ☐ the candidate provides evidence that it was used to fully test the functionality and accuracy of the spreadsheet solution and that the solution fully meets the requirements of the design specification.	
Page	**E.1 Criteria (0 - 1 - 2 - 3 marks)**	**Comment**
	☐ The candidate produces clear technical documentation that identifies the numerical processing methods used, and user documentation that includes copies of menus and screens used, instructions on data entry and routes through the spreadsheet menus and the outputs expected;	
	E.2 Criteria (4 - 5 marks)	
	☐ The candidate produces technical and user documentation that makes use of graphic images, their technical documentation includes explanations of all technical aspects of the solution, the user documentation includes copies of menus and data input screens, instructions on data entry and routes through the spreadsheet menus, types of output available and possible error messages;	
	E.3 Criteria (6 - 7 - 8 marks)	
Mark (Max 8)	☐ The candidate produces complete, high-quality, stand-alone technical and user documentation that makes effective use of graphic images, their technical documentation includes explanations of all technical aspects of the solution, the user documentation includes copies of menus and data input screens, instructions on data entry and routes through the spreadsheet menus, types of output available and possible error messages.	

Page	F.1 Criteria (0 - 1 - 2 marks)	Comment
	☐ The candidate comments on the effectiveness of the final solution, with some overall indication of how the work may be improved in the future;	
	☐ the candidate evaluates aspects of their personal performance that affected the solution;	
	☐ the report may contain errors in spelling, punctuation and grammar;	
	F.2 Criteria (3 - 4 - 5 marks)	
	☐ The candidate provides an analysis of their final solution that identifies its strengths and weaknesses and considers user feedback in order to identify how the work may be improved in the future;	
	☐ The candidate evaluate aspects of their personal performance that affected the solution by identifying their strengths and weaknesses, with some suggestions for improvement to the overall process;	
	☐ The report contains few spelling, punctuation and grammar errors;	
	F.3 Criteria (6 - 7 - 8 marks)	
Mark (Max 8)	☐ The candidate provides a full critical analysis of their final solution identifying how well it meets the initial brief, taking into account and analysing user feedback in order to identify how the work may be improved in the future;	
	☐ the candidate evaluates aspects of their personal performance by identifying their strengths and weaknesses and how they may address these issues to be more effective in the future;	
	☐ the report is consistently well-structured and there will be few, if any, spelling, punctuation and grammar errors.	
MARK TOTAL		Please note: This form may be updated on an annual basis. The current version of this form will be available on the OCR website (www.ocr.org.uk). The completed Centre Authentication form CCS160 **must** accompany the MS1 when it is sent to the moderator

Guidance on Completion of this Form

1   **One** form should be used for each candidate.

2   Please ensure that the appropriate boxes at the top of the form are completed.

3   Please enter *specific* page numbers where evidence can be found in the portfolio, and where possible, indicate to which part of the text in the mark band the evidence relates.

4   Enter the mark awarded for each strand of the marking criteria in the appropriate box and also enter the final mark in the total column.

5   Add the marks for the strands together to give a total out of 50. Enter this total in the relevant box.