

**Mathematical, Physical, and Life Sciences Division**  
**PG Cert, PG Dip, and MSc in Software Engineering**  
**PG Cert, PG Dip, and MSc in Software and Systems Security**

**Report of the examiners 2012–2013**

Covers the examiners' meetings and results released in December 2012 (assessing work from MT 2012 courses), April 2013 (HT 2013 courses), and October 2013 (TT 2013 courses).

## Part I

### A. Statistics

#### (1) Numbers and percentages in each class/category

##### (a) *Classified examinations*

There were no classified examinations.

##### (b) *Unclassified examinations*

#### PG Cert in Software Engineering

Category	Number				
	2008/09	2009/10	2010/11	2011/12	2012/13
Distinction	2	3	1	0	1
Pass	7	1	4	4	1
Fail	0	0	1	2	0

#### PG Cert in Software and Systems Security

Category	Number				
	2008/09	2009/10	2010/11	2011/12	2012/13
Distinction	2	1	1	0	1
Pass	2	2	2	0	0
Fail	0	0	0	0	0

#### PG Dip in Software Engineering

Category	Number				
	2008/09	2009/10	2010/11	2011/12	2012/13
Distinction	1	0	2	0	0
Pass	3	3	1	1	5
Fail	0	0	0	0	1

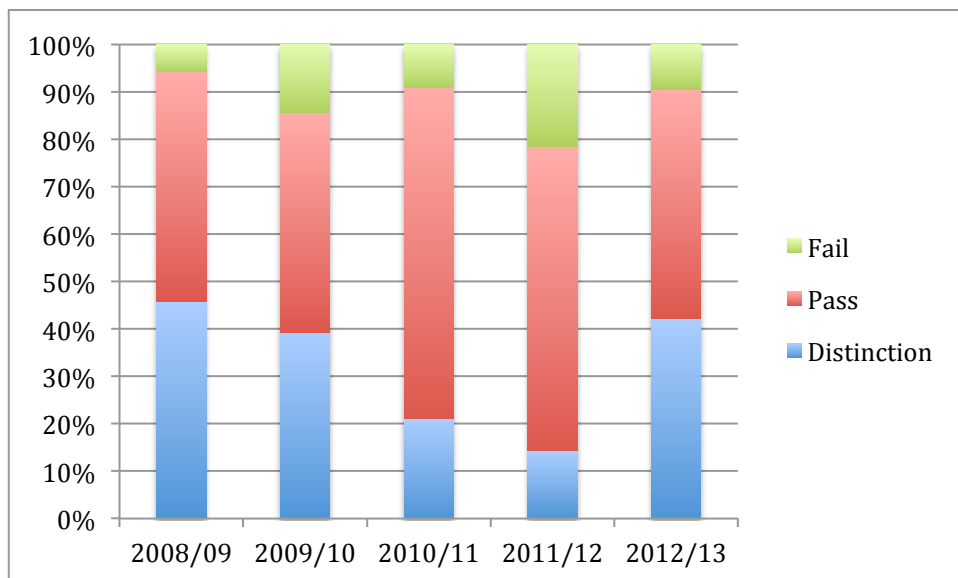
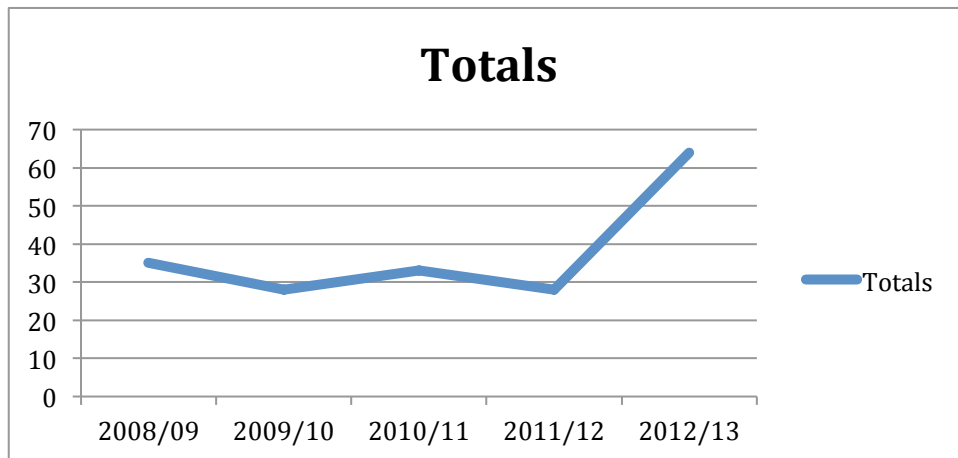
#### PG Dip in Software and Systems Security

Category	Number				
	2008/09	2009/10	2010/11	2011/12	2012/13
Distinction	0	0	0	0	0
Pass	0	1	0	0	1
Fail	0	0	0	0	0

## MSc in Software Engineering

Category	Number				
	2008/09	2009/10	2010/11	2011/12	2012/13
<b>Distinction</b>	<b>16</b>	<b>11</b>	<b>7</b>	<b>4</b>	<b>27</b>
<b>Pass</b>	<b>17</b>	<b>13</b>	<b>23</b>	<b>18</b>	<b>31</b>
<b>Fail</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>6</b>
<b>Totals</b>	<b>35</b>	<b>28</b>	<b>33</b>	<b>28</b>	<b>64</b>

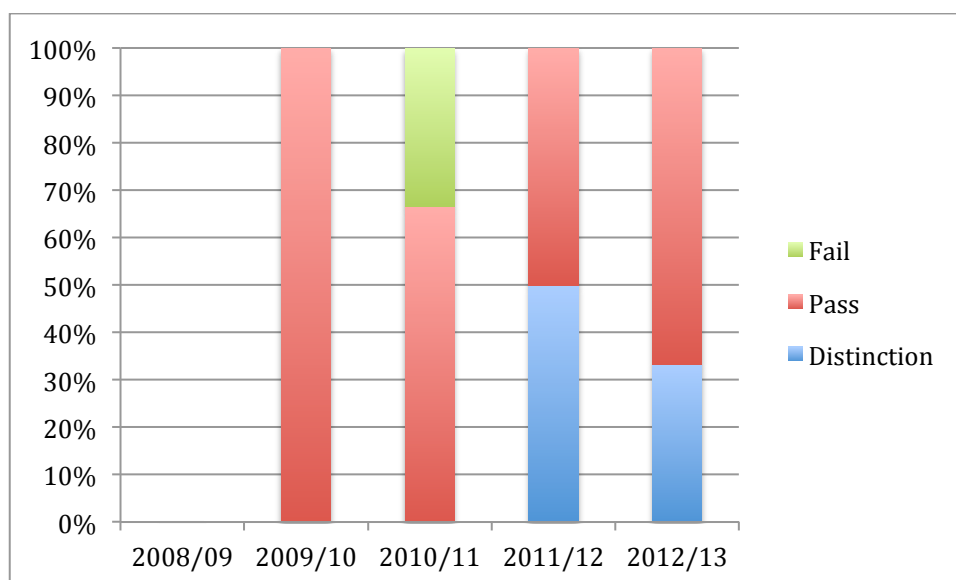
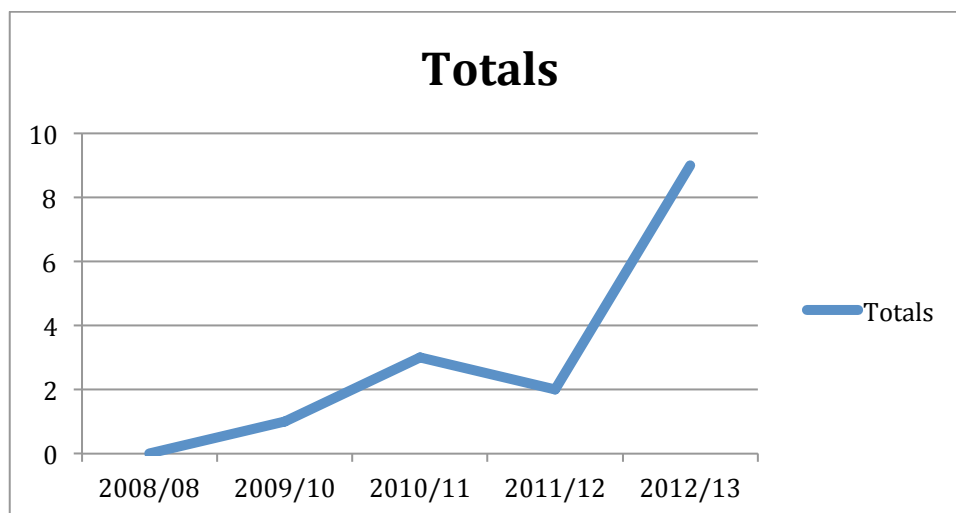
Category	Percentage				
	2008/09	2009/10	2010/11	2011/12	2012/13
<b>Distinction</b>	<b>45.7</b>	<b>39.3</b>	<b>21.2</b>	<b>14.3</b>	<b>42.2</b>
<b>Pass</b>	<b>48.6</b>	<b>46.4</b>	<b>69.7</b>	<b>64.3</b>	<b>48.4</b>
<b>Fail</b>	<b>5.7</b>	<b>14.3</b>	<b>9.1</b>	<b>21.4</b>	<b>9.4</b>



## MSc in Software and Systems Security

Category	Number				
	2008/08	2009/10	2010/11	2011/12	2012/13
<b>Distinction</b>	0	0	0	1	3
<b>Pass</b>	0	1	2	1	6
<b>Fail</b>	0	0	1	0	0
<b>Totals</b>	0	1	3	2	9

Category	Percentage				
	2008/09	2009/10	2010/11	2011/12	2012/13
<b>Distinction</b>	0.0	0.0	0.0	50.0	33.3
<b>Pass</b>	0.0	100.0	66.7	50.0	66.7
<b>Fail</b>	0.0	0.0	33.3	0.0	0.0



## (2) If vivas are used:

There were no vivas used.

## (3) Marking of scripts

All assignments (682) are marked by the assessor for the course in question (who may also be an examiner), and are moderated with sight of both marker's comments and the original assignment by an examiner (who is never the same person as the first marker).

All dissertations (75) are independently marked by an assessor and an examiner. Where the resulting marks differ significantly, they are re-marked by the external examiner. This happened in twenty one cases.

## B. New examining methods and procedures

Following a student complaint about changes to examination conventions, and in agreement with the Proctors, we have modified our examination processes to accommodate for changes in examination conventions during a student's period of study. The examiners now take into account which examination conventions were published at the start of a student's registration and apply the most favourable. Other than that, no new method was applied in this year, although preparation work was undertaken to enact double marking for assignment from Michaelmas 2013 onwards.

## C. Please list any changes in examining methods, procedures and conventions which the examiners would wish the faculty/department and the divisional board to consider.

**Double and anonymous marking** From Michaelmas 2013 onwards, we will be introducing double marking for all assignments as required by the Education Committee. There will be a transition period during which we will be adapting to a new software support system and accompanying assessment processes. Once we are satisfied that the marking processes and software system are robust, we will also adopt anonymous marking as the norm for all our assignments, following the suggestions from the previous two examiners' reports. We believe anonymous marking is beneficial for the following reasons:

- It reduces the possibility of bias from classroom interactions. The assessor will already have an impression of an individual's ability and understanding, based upon their contributions in class; it is important that this impression should not prejudice the assessment of their assignment.
- It ensures that each assessment is independent of any other assessments. The assessor must judge each submission on its own merits; they cannot consult earlier assessment reports for the same student; neither can they be influenced by a student's existing profile of grades.
- It makes it less likely that the assessment could be influenced by any other factors: for example, any personal indulgence of a particular student, or of their employer.

Each submission will be allocated a temporary assessment number, assessed, and moderated without the student being identified. Only after moderation will the student's name be attached to the submission, moderated report, and grade.

## D. Please describe how candidates are made aware of the examination conventions to be followed by the examiners.

The Programme Handbook is presented through the Software Engineering website, and incorporates a set of examination conventions.

<http://www.softeng.ox.ac.uk/handbook/index.html>

The website is periodically drawn to the attention of all students.

## Part II

### A. General comments on the examination

The form of the Software Engineering Programme means that this examination is unlike most others in MPLS. Students attend one-week modular courses at their own choice, spread over several years. After each course they are given a take-home assignment, for which they submit a script six weeks later. Each script is marked by an assessor—almost invariably the course lecturer—and moderated by an examiner. The marking process entails producing an extensive (1–3 pages) report for the student, with formative assessment as well as a final summative grade on the University's standard scale. Students accumulate these grades through the years of their study, and these are normally averaged according to a process in the Examination Conventions to give an overall result. This is combined with a dissertation mark to give an overall fail/pass/distinction result.

**Marking of dissertations** Each dissertation is marked independently by an assessor and an examiner, who each supply a written report and a proposed mark. Where the examiner and assessor propose marks with a difference of 10 or less, and not crossing a fail/pass/distinction boundary, the mean of the two marks is used—with discussion between the two to agree that this is appropriate. In the other cases, an attempt is made to resolve the mark prior to the Examiners' meeting. Any remaining contentious cases are additionally

reviewed by the external examiner.

**Examiners' meetings** Examiners' meetings occur three times each year, coinciding with each academic term. Dissertations are considered at each Examiners' meeting. Examiners' meetings are scheduled during or shortly before 0<sup>th</sup> week of the following term. A submission deadline falls four weeks before the Examiners' meeting. For those students who have reached the end of their period of study, this is a hard deadline. Those wishing to complete their studies sooner can submit in time for an earlier deadline. Because the examiners meet to consider student results three times in the year, the examiners keep detailed minutes of their meetings, in addition to preparing this report.

**Prizes** The examiners nominated two dissertations for the Richard Bird prize.

**Plagiarism** There was one case of plagiarism, which was reported to the proctors in September 2013. This case is still being investigated.

## **B. Equality and diversity issues and breakdown of the results by gender**

**Trends** It may be noted that (a) we have had a sharp rise in the number of students being examined, (b) the proportion of students being awarded a distinction has risen sharply following a steady decline, and (c) the numbers of students being examined for a degree in Software and Systems Security is growing at a steady rate.

The increased number of students being examined is expected, given that the Programme has been admitting between 60 and 80 students per year, and in a steady state, we should be examining similar number every year.

The rise in the number of distinctions following a steady decline is explained by the fact that the we are now taking into account which examination conventions were in force at the time of student registration, and that conventions in force before 2009 made it easier to be awarded a distinction.

The growing number of Security students is welcome, however the numbers are not sufficient to identify any trends.

**Gender differences** The regrettably low number of female candidates means that a breakdown of results by gender would yield no statistically-significant data.

## **C. Detailed numbers on candidates' performance in each part of the examination**

Presented as an annex.

## **D. Comments on papers and individual questions**

Through detailed personal feedback, students receive extensive comments on their assignments and individual questions. Where appropriate, the assessor includes information for the whole class on what might have been found in a model answer.

## **E. Comments on the performance of identifiable individuals and other material which would usually be treated as reserved business**

None.

## **F. Names of members of the board of examiners**

Dr Ivan Flechais (chair, prepared this report)

Prof Jim Davies (Programme Director, ex officio)

Prof Jeremy Gibbons

Dr Niki Trigoni

Prof Michael Butler (external)

## Annex

Course	Date	Mean	Registered	Submitted	90-100	80-89	70-79	60-69	55-59	50-54	40-49	30-39	20-29	20-
PAS	14th May 2012	62.77	15	13	0	0	5	4	2	1	1	0	0	0
OOP	2nd July 2012	67.38	20	13	1	0	6	3	2	0	0	1	0	0
SPL	9th July 2012	77.78	11	9	0	5	3	1	0	0	0	0	0	0
SRO	16th July 2012	63.25	4	4	0	0	2	1	0	0	1	0	0	0
PMO	13th August 2012	68.73	15	11	0	1	5	3	0	2	0	0	0	0
AGM	20th August 2012	65	16	12	1	3	0	3	2	2	1	0	0	0
FPR	3rd September 2012	71	14	9	0	3	1	3	0	1	2	0	0	0
TCI	3rd September 2012	76.78	12	9	0	3	5	1	0	0	0	0	0	0
XML	10th September 2012	62.73	15	11	0	2	1	4	2	0	2	0	0	0
SEM	10th September 2012	54.8	17	10	0	2	1	1	2	0	2	2	0	0
DAT	17th September 2012	68.67	13	12	2	1	3	2	1	3	0	0	0	0
MRQ	17th September 2012	68	9	6	0	1	1	3	1	0	0	0	0	0
SPR	24th September 2012	62.68	20	19	0	0	5	8	3	3	0	0	0	0
Projects	1st October 2012		19	0	0	0	0	0	0	0	0	0	0	0
FOR	8th October 2012	80	7	6	3	1	0	1	1	0	0	0	0	0
SPR	8th October 2012	62.13	16	15	0	0	4	7	2	1	0	1	0	0
CPR	15th October 2012	72.67	20	18	0	7	5	5	0	0	0	0	1	0
DES	15th October 2012	65	9	6	0	2	0	1	3	0	0	0	0	0
CLS	22nd October 2012	66.82	18	17	1	4	1	5	3	2	0	1	0	0
STE	22nd October 2012	61.5	8	4	1	1	1	0	0	0	0	0	0	1
SDM	29th October 2012	58.1	12	10	0	1	0	4	2	2	0	1	0	0
CDS	5th November 2012	66	15	13	2	2	2	4	0	0	0	2	1	0
PAS	5th November 2012	53.83	7	6	0	0	2	2	0	1	0	0	0	1
AGM	12th November 2012	65.3	12	10	0	1	3	3	0	3	0	0	0	0
DPA	12th November 2012	56.25	18	12	0	2	1	5	1	1	0	0	1	1
REN	19th November 2012	70.42	15	12	2	1	1	6	2	0	0	0	0	0
RIS	19th November 2012	65.56	9	9	2	0	3	1	1	1	0	0	0	1
MSS	26th November 2012	68.71	10	7	1	0	2	3	0	0	0	1	0	0
NES	3rd December 2012	63.71	20	17	0	2	5	3	3	4	0	0	0	0
SOA	10th December 2012	65.61	22	18	2	4	3	3	2	1	1	1	0	1
Projects	7th January 2013		17	0	0	0	0	0	0	0	0	0	0	0
APE	14th January 2013	70	15	13	0	4	2	5	1	1	0	0	0	0
SEM	14th January 2013	62.54	18	13	1	2	2	4	2	0	0	1	1	0
DAT	21st January 2013	66.6	12	10	0	1	3	5	0	1	0	0	0	0
SPR	21st January 2013	65.38	17	13	0	3	2	4	1	3	0	0	0	0
OOR	28th January 2013	64.57	21	21	0	3	4	9	1	2	1	0	0	1
OOP	4th February 2013	68.25	20	20	0	1	9	7	2	1	0	0	0	0
SIM	4th February 2013	65.36	19	14	0	1	3	6	2	2	0	0	0	0
XML	11th February 2013	57.33	11	9	0	1	0	3	2	0	2	0	1	0
REN	11th February 2013	70.67	5	3	0	0	2	1	0	0	0	0	0	0
DES	18th February 2013	65	15	11	1	2	2	1	1	2	1	1	0	0
STE	18th February 2013	61	12	8	0	1	1	2	1	1	2	0	0	0
OOD	25th February 2013	60.8	13	10	0	0	1	4	3	1	1	0	0	0
SDM	25th February 2013	62.3	11	10	0	2	0	5	1	0	1	1	0	0
CDS	4th March 2013	77.78	13	9	4	0	1	4	0	0	0	0	0	0
SWN	4th March 2013	63.77	18	13	0	1	2	5	5	0	0	0	0	0
MCH	18th March 2013	63.8	8	5	0	1	1	2	0	0	1	0	0	0
DPA	18th March 2013	66.18	14	11	1	1	2	4	2	1	0	0	0	0
Projects	8th April 2013		20	0	0	0	0	0	0	0	0	0	0	0
CPR	15th April 2013	72.38	15	13	0	3	5	4	0	1	0	0	0	0
CLS	22nd April 2013	65.67	16	15	0	3	3	4	3	1	1	0	0	0
SDE	22nd April 2013	66	11	10	1	2	1	3	1	1	1	0	0	0

AGM	29th April 2013	64.33	18	15	0	5	3	2	3	1	0	0	0	1
FPR	13th May 2013	69.65	24	17	1	3	3	7	1	2	0	0	0	0
PAS	13th May 2013	65	19	17	1	1	3	7	1	3	0	1	0	0
OOR	20th May 2013	57.06	20	18	0	0	5	5	2	2	2	1	0	1
PRO	20th May 2013	67.8	12	10	0	1	3	4	2	0	0	0	0	0
SDM	3rd June 2013	67.67	6	6	0	2	0	2	1	1	0	0	0	0
MSS	10th June 2013	71.89	12	9	1	3	0	3	1	1	0	0	0	0
DAS	17th June 2013	67.38	9	8	0	2	1	4	0	1	0	0	0	0
EAR	24th June 2013	66.07	16	14	0	1	2	9	2	0	0	0	0	0
APE	8th July 2013	68.58	20	19	0	2	8	6	1	2	0	0	0	0