E-submission & E-marking Departmental Planning Guide

eLearning Unit, Centre for Life Long Learning. Last updated: 02/12/2016

1. Introduction

The purpose of this document is to provide departments with the information to support the planning and implementation of electronic submission and electronic marking using centrally supported technologies.

Scope:

This document focuses on the electronic submission of student individual or group coursework documents using the two main centrally supported tools currently within VITAL- Blackboards' Assignment and Turnitin's Assignment tools. Electronic marking is supported using Blackboards' Inline Grading tools, and Turnitin's GradeMark tool.

This document does not cover electronic submission through the use of other centrally supported software and tools such as wikis, blogs, or eportfolios.

Complementary resources:

This document is complementary to other available resources provided by the eLearning Unit to support electronic submission and electronic marking. These currently include detailed technical 'how to guides' to use the Blackboard and Turnitin e-submission and e-marking software, consultation, scheduled and bespoke workshops and support.

See section 7 at the end of this document for more detailed support information.

Terms used:

E-submission – covers all processes setting up, communicating with students and receiving submitted coursework electronically.

E-marking – covers all electronic marking, grading, feedback and commenting processes in addition to any moderation or management processes.

2. Overview to the benefits of e-submission

Benefits to students can include:

- Students can submit their work without having to travel to the University.
- Reduced printing costs.
- Meeting student expectations seen by many students as normal practice in a digital age.
- Electronic reminders about marking turnaround times can be communicated through VITAL module announcements etc.

Potential draw backs for students can include:

- For some large cohort programmes moving to e-submission can further reduce the physical contact students have with a school or department.
- Service disruptions mean that students may not be able to submit on time.

Benefits for staff (academic and professional support) can include:

- The ability to monitor student submissions before the due date and remind students about forthcoming submissions, if appropriate.
- Locate assessment support information alongside the submission tool. For example, an assignment brief and other information to support students to complete an assignment can by physically linked to or near to the assignment submission tool (Blackboard or Turnitin) within a VITAL ensure that students have all appropriate information to complete the assignment in a single location online.

Potential drawbacks for staff can include:

 Subtle variations in the features and facilities of using Blackboard or Turnitin emarking tools requires programme teams or module leaders to carefully think through their appropriate application of technology and marking processes to meet their assessment requirements.

3. Overview to the benefits of e-marking

Benefits to students can include:

- Students can easily access grades and feedback electronically at any time online through VITAL modules.
- Increases privacy. Students can access grades and feedback online when they are ready to do so.
- Clarity of feedback can be improved potential to improve on the legibility of hand written comments and annotations.

- Students can potentially easily access and re-find feedback and grades for subsequent assessments.
- Meeting student expectations seen by many students as normal practice in a digital age.

Potential drawbacks for students can include:

• Students could miss important feedback if they don't fully understand how to use specific feedback tools such as Turnitin's GradeMark.

Benefits for staff (academic and professional support) can include:

- Some improvements in efficiency of the grading process. Standard re-useable feedback comments can be created (Turnitin GradeMark software), no additional processes are required to return completed grades and feedback to students – students can access these through the point of submission in VITAL modules.
- The ability to grade multimedia assessment projects e.g. videos and images.
- Some facilities to return audio and video feedback that can be used as an alternative or in addition to text-based comments and annotations.
- Some ability to monitor which students have accessed their grades and feedback (Turnitin's GradeMark software.)
- Greater transparency of e-marking across different modules and programmes can potentially lead to improvements in the standards and consistency of marking and comments.
- Completed grades and feedback are backed up electronically.
- Reduction in departmental printing costs (if e-submission is used).
- Integration with electronic text-matching to support plagiarism and collusion detection (Turnitin).
- Marking and feedback can be completed on-campus, or away from campus reducing the need to take large bundles of paper home. Both Blackboard and Turnitin have iPad grading apps that enable marking offline.

Potential drawbacks for staff (academic and professional support) can include:

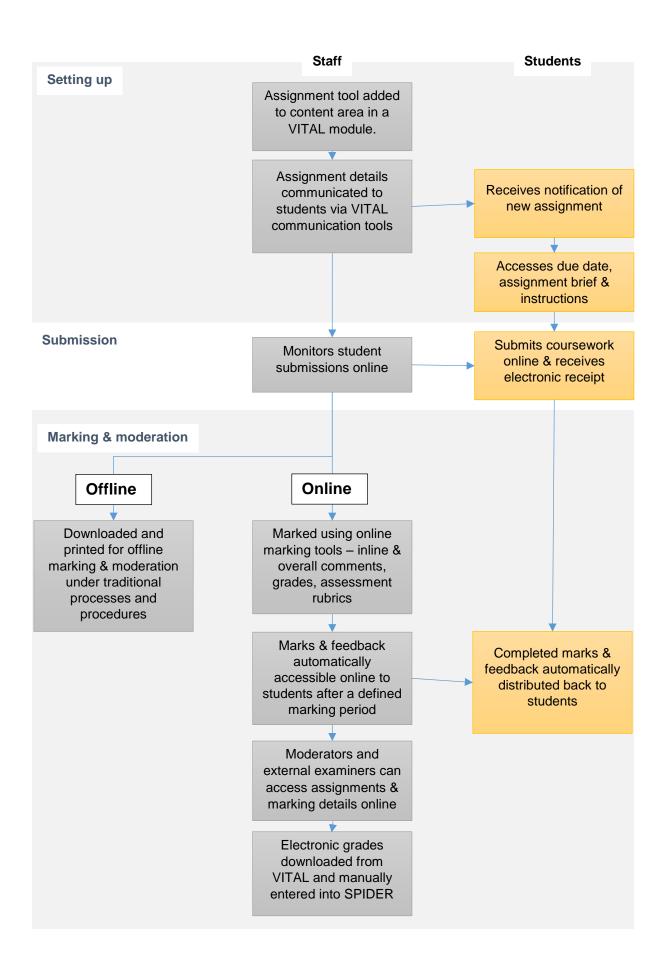
- Ergonomics of marking large quantities for electronic documents through a computer screen or tablet device can be problematic for some assessments.
- Currently there are limitations in the effectiveness of e-marking tools in supporting for example, anonymous second marking and moderation processes.

National research on benefits and issues:

JISC's <u>electronic management of assessment</u> (EMA) research from across the sector summaries in more detail the key benefits and issues for staff and students of e-submission and e-marking.

4. Overview to the submission and marking process

The following flow chart summarises an example of the basic e-submission and emarking processes using the Blackboard and Turnitin tools from a staff and student perspective:



5. University of Liverpool examples of practice

A number of departments around the University have developed detailed e-marking and e-submission strategies. Go to the 'Further support and guidance' section of this document for more information.

6. Key issues for consideration

The following section is designed to highlight key issues that need consideration when planning the implementation of e-submission or e-marking.

The tables highlight the key differences between the Blackboard and Turnitin e-marking and e-submission software tools. Please use these tables in conjunction with the 'how to guides' that will support you to set up and use these tools in more detail – see section 8 at the end of this document.

Subsequent bullet points outline other key issues for consideration relevant to each stage in the submission and marking processes.

These tables will periodically be updated with software changes – please consult the eLearning Unit (see contact details at the end of this document) for current advice on specific issues that may be critical to your development of e-submission or e-marking.

E-submission

ultiple. es.	No. Yes.
98.	Yes.
ode 1 – None. Grade, iteria marking and rerall feedback omment for any obmission also possible ere. ode 2 - To also use the line Grading facility file pes are restricted in this ode.	Mode 1 – For Originality Checking (plagiarism) and GradeMark – file types restricted. Mode 2 – Mode 1 files plus some image file types which can be annotated with GradeMark. Mode 3 – Any file can be submitted - no Originality- Checking and restricted use of GradeMark. No submission - restricted
it (()) ()) ()) ())	teria marking and erall feedback mment for any omission also possible re. ode 2 - To also use the line Grading facility file lies are restricted in this

		use of GradeMark (for presentations for example).
File size limits.	No - currently no file size limit but: Students may find very large files may not upload with timeout issues. CSD to explore limits to submitted file sizes. Video files should not be uploaded (use Stream media server instead and submit the link.)	Yes - maximum 40 Mb file size.
Anonymous submissions	Yes – this can only be switched off globally to reveal student names and ID. This can't be switched on again, but doesn't reveal student marks or feedback.	Yes – this can only be switched off individually to reveal a student's name and ID. This can't be switched on again, but doesn't reveal student marks or feedback.
Electronic text matching to support plagiarism & collusion detection.	No.	Yes.
Ability for students to resubmit their work after the due date.	Yes, students can resubmit their work after the due date with specific settings. Copies of all submissions are retained – late submissions are indicated.	No.

Other issues for consideration:

6.1 Students on financial suspension

Students on financial suspension will currently not be able to submit their work electronically.

If a student becomes financially suspended during the electronic marking process after they have submitted their work online, any feedback or grades created using the Blackboard Inline Grading tools will temporarily not be accessible to staff or to the students until they are reinstated.

The GradeMark software in Turnitin will enable the marking process to be completed electronically for students that become financially suspended after they have submitted their work online, unless the 'roster sync' facility (transfers grades between

Blackboard's Grade Centre and Turnitin) is activated in which case the completed feedback and grades for that student will temporarily disappear until they are reinstated from financial suspension.

Please check with the eLearning Unit for up to date advice – contact details are in section 9 of this document.

6.2 Academic integrity self-declaration

Currently there is no specific facility within the centrally supported software that enables students to indicate that they are submitting their own work to meet academic integrity requirements.

Appendix A includes examples of standard text that can be used as part of an electronic cover sheet.

6.3 Disability issues

Currently there is no simple electronic alternatives to the 'yellow sticker' system added to paper submissions. Appendix B includes workaround examples of how you can support this process electronically. This generally involves creating a standard electronic cover sheet text that a student will be required to include within their submitted assignment.

6.4 Sympathetic marking

Similarly, the use of an electronic cover sheet is the current best method for students to indicate to the assessor any agreed mitigating circumstances that need to be taken into account when marking. Appendix C includes examples of standard text that can be used in an electronic cover sheet. (Agreed methods to do this are currently being discussed and agreed with SAS.)

6.5 Accessibility

Turnitin is currently not fully accessible to staff and students with specific disabilities that require the use of assistive technologies to navigate the software. Turnitin are currently planning enhanced Turnitin software to meet accessibility standards. The eLearning Unit are in the process of organising a more detailed evaluation of the accessibility of the Turnitin software.

Blackboard tends to and more accessible than Turnitin - <u>Blackboard accessibility</u> <u>information</u> website will provide more detailed information. The eLearning Unit are in the process of organising a more detailed evaluation of the accessibility of the Blackboard Assignment and Inline grading tools.

Appendix D will provide detailed information about specific issues and possible workarounds when this evaluation process has been completed.

6.6 Turnitin and VITAL service disruption

In the case of software service disruption that is not the fault of the student - staff are advised to monitor <u>CSD announcements</u> and <u>Turnitin's system status website</u> to assess the length and impact of any technical failure.

Currently there is no institutionally agreed procedures in case of service disruption of Blackboard or Turnitin.

You are advised not to set due dates or deadlines outside of office hours (Monday to Friday 9am – 5pm) or on University closed days. Schedule the time due to be around midday to allow for any issues to be investigated and resolved. Where possible it is also better to schedule due days to avoid Fridays and Mondays.

Our suggestion is that you develop a clear communication strategy to inform students and colleagues of any service disruptions and agreed procedures. The most effective strategy in the event of service disruption is to have agreed rescheduling of submission dates for example from Friday afternoon to Monday morning.

6.7 Departmental printing costs

If you intend to implement e-submission but not e-marking you will need to budget and plan for printing within the department. Appendix E outlines key costs and issues for consideration.

Management of the submission process:

Issue/ facility	Blackboard Assignment	Turnitin
Notification to students	Students can automatically	No automatic
about a new electronic	be notified of new	announcements, but you
submission.	assignments via the	can manually communicate
	Announcement tool,	to students via VITAL's
	homepage Global	module announcement's.
	Navigation and Blackboard	
	Student app.	
Ability to notify students of	Yes. Through the	No.
new assignments via mobile	Blackboard Student App	
apps.	that can be downloaded	
	from the Apple and Google	
	App stores, or by students	
	or for the CSD website.	
Automatic notification of	Yes, via notification settings	No.
assignment due date	(students currently must set	
	this for email and mobile	
	notifications – appears in	
	Global Navigation menu by	
	default).	
Automatic notification when	Yes, via notification settings	No.
the due date has passed.	(students currently must set	
	this for email and mobile	
	notifications – appears in	
	Global Navigation menu by	
	default).	

Marking process:

Issue/ facility	Blackboards' Inline Grading	Turnitins' GradeMark
Support for double marking or moderation	Yes –support for double marking & moderation. Staff can add grading notes that can be seen by another marker, but not visible to students. No support for anonymous second marking or moderation.	No support for double marking or moderation. No facility to add hidden marker notes. Workarounds are possible such as adding additional moderation columns to a VITAL modules' Grade Centre next to the column for the Turnitin GradeMark assignment. This enables a moderator to add notes which students cannot see etc.
Ability to link assessment criteria to comments.	No.	Yes.
Electronic Criteria Marking/Rubrics possible.	Yes.	Yes.
Share Criteria/Rubrics between staff.	Yes.	Yes.
Ability to create, use and share with colleagues standard inline feedback comments.	No.	Standard comments (spelling mistake etc.) can be created and shared across different programme teams etc. Standard set of comments included in the software.
Video feedback	No.	No.
Audio feedback	No.	Yes – available on the desktop and the iPad app.
Support for specific scripts	MathsML, LaTex.	No.
Support for word count.	No, but you can download the students original Word file etc.	Yes. This is a whole document word count. Original file can be downloaded for other word count types.
Show assignment statistics (average and median) back to students.	Yes – option to display mean and average statistics for a specific assessment back to students through a VITAL module.	No.
Support for electronic text matching to support plagiarism detection.	No, but submitted student work can be batch submitted by a member of staff to Turnitin.	Yes.

Communicating marking periods (due date to post date) to students.	No – only the due date is communicated to students.	Yes - post-date (when students will receive marks and feedback) is displayed through the link to Turnitin where they submitted their coursework.
Ability for students to view grades and marks via a mobile app.	Yes, through the Blackboard Student App that can be downloaded from the Apple and Google App stores, or by students or for the CSD website.	No.
Statistical analysis of assignments.	No. (Some limited stats from rubric reports is possible.)	Yes – stats on the use of standard and bespoke quick comments & rubrics used within multiple assignments marked using GradeMark, within a VITAL module.
Ability to return feedback separately from grades to students.	Yes.	No.
Processes for managing and moderating the final grade.	Yes.	No.
Offline electronic grading possible	No.	Yes, but only via the iPad App.

Other issues for consideration:

6.8 Moderated marks

Both software tools currently don't support the option to add a raw and a modified grade electronically. For students that have submitted later without an agreed extension best practice advice is to add the moderated mark to return to the students at this stage and to clearly indicate in the text feedback comments how the grade has been modified.

6.9 External examiner access

External examiners can be given instructor access to VITAL and Turnitin currently on a 90 day renewable basis. You will need to complete CSD's temporary lecturer registration (please contact CSD's service desk servicedesk@liv.acuk) process to generate an MWS username and password. Once this has been created, an existing instructor can be enrol the external examiner directly to a VITAL module. Different external examiners will have different preferences for accessing e-marking through a virtual learning environment such as VITAL and it would be beneficial to discuss this with them.

6.10 Managing completed grades electronically

Currently there is no automatic link between electronic grades in VITAL and the student record system. Completed grades can however be downloaded into a spreadsheet from VITAL's Grade Centre. (See this FAQ for details) Admin staff need

to ensure there are no transcription errors in adding grades to the student record system.

7. Implementation planning

The following are some of the additional issues to consider in the implementation of e-submission or e-marking:

7.1 Learning from existing experience

- Review the experiences of any module or programme etc that already extensively uses e-submission or e-marking.
- Similarly, it may be beneficial to review the experiences of departments within your school or faculty that run similar electronic coursework assignments to assess how you could develop your own implementation.
- If your department or programme is new to using this technology we recommend that you implement a pilot project to evaluate the benefits and issues specific to your assessment requirements. The eLearning Unit staff have extensive experience of supporting the piloting of e-submission and emarking around the University and will be able to offer advice – see contact information below.
- In any new pilot or expansion of the use of e-submission and e-marking we advise that you include key stakeholders in the evaluation process – particularly students and administration staff.
- Implementing EMA detailed information from JISC's to support the implementation of this technology. These resources are a synthesis of research from a number of institutions in the UK's experiences of esubmission and e-marking.

7.2 Reviewing assessment practices

- The implementation of e-submission and e-marking across a whole programme or within a department can be an opportunity to review and agree assessment practices for example:
 - Consistency in use of assessment criteria and electronic assessment rubrics.
 - Nature and type of inline comments.
 - Use of standard comments (Turnitin's GradeMark tool) new standard comments sets can be created and shared across programme teams.
 - Agreements on the level and nature of overall comments returned to students.
 - Agree the location of links to Blackboard or Turnitin tools within VITAL modules so that students can easily find and access feedback across VITAL modules within programmes.
- Ensure that there is consistency in locating and attaching associated assessment information within VITAL modules (assessment criteria, assignment brief,

instructions etc) so students can easily locate it.

- Communicate clearly with students if you intend to use e-marking for submitted coursework and which technologies you have selected to do this. Preferably students should be informed in advance of the assessment through module hand books and at the beginning of modules and programmes. Ensure students have adequate information about where to access their e-marks through VITAL modules or other methods used.
- Communicate to students the nature and scope of electronic marks and feedback they can expect to receive – marks, inline comments, general comments, assessment rubrics or audio feedback.
- If practicable, give students opportunities to practice receiving feedback electronically. This can be important with Turnitin's GradeMark tools. Students will need to understand how to access each area of feedback as students can easily miss each feedback section if they don't click on appropriate links.
- Communicate clearly to students if you intend to alert them (in addition to postdates within submission tools), for example by adding a module announcement in a VITAL module, that their e-marks are available or are service disruptions etc. It can be beneficial for students for these alerts to be consistently communicated across modules and programmes.

7.3 Hardware support

- If you intend to implement e-submission without e-marking, it is important that
 you review the implications on admin processes particularly the time and cost
 issues associated with printing student electronic submissions. Appendix E
 outlines key costs and time considerations.
- As part of any review or pilot it can be beneficial to evaluate the hardware (Computers, tablets etc.) that can most effectively support the e-marking process.
- Staff will have different preferences for using a desktop computer or a tablet (iPad), and different assessments are sometimes easier to mark on different hardware. For example, some assignments where you are required to review draft submissions or supporting information with the students' main script can be handled better with a desktop computer with a second monitor. Other assessments might be much quicker to marking using an iPad app.

8. Effective learning and teaching practice

<u>iTeach</u> and the <u>JISC Design Studio</u> contain more detailed resources on the learning teaching issues associated with assessment and feedback. These include:

- Research into benefits of students receiving marks and feedback electronically.
- Releasing feedback before grades to support students to engage with feedback.
- Processes to support students to self-assess electronically before submitting coursework to support them to re-visit and learn from previous feedback.
- Using originality reports generated in Turnitin to support academic writing as a formative process to support better referencing and quotations etc.

Appendix F is an adaptation from a JISC research project outlining the possible use of technology and student activities throughout the whole EMA cycle – particularly ideas for engaging students in assessment criteria prior to submission, and strategies for engaging students with feedback and the feedforward processes.

9. Further support and guidance

If you cannot find a guide to something you require in the list below please contact the eLearning Unit for further advice.

Staff how to guides:

- <u>Blackboard Assignment tool guide</u> Written step-by-step guide (Pdf) to setting-up, managing, offering grades and feedback, and releasing grades to students using the Blackboard Assignment tool.
- <u>Blackboard Assignments inline grading tool</u> Written guide (webpages) and video on using the Blackboard inline grading tool for giving electronic feedback directly on student submitted work.
- <u>Blackboard Grade Centre guide</u> Written guide (webpages) to the Blackboard Grade Centre for managing Blackboard assignments and assignment grades.
- <u>Turnitin Assignment set-up guide</u> Written guide (webpages) to setting up Turnitin assignments in VITAL modules (please note we do not have the E-Rater grammar check facility described in this guide).
- <u>Turnitin Assignments management guide</u> Written guide (webpages) to the Turnitin Assignment inbox for managing assignment submissions.
- <u>Turnitin GradeMark guide</u> Written guide (webpages) to using Turnitin GradeMark for giving electronic feedback directly on student submitted work.

Student how to guides:

A selection of guides that can be adapted for school/department use.

This linked-to page gathers all guides and videos together.

- <u>How to submit to Turnitin</u> Full, written guide (Pdf) for students on submitting an assignment to Turnitin.
- How to submit to Turnitin quick guide Shorter version of the above (Pdf).
- How to submit to Turnitin overview Short, introductory video guide to submitting to Turnitin.
- <u>Turnitin useful features</u> More in-depth video guide to some of the other features of the Turnitin system for students.
- How to submit to Turnitin quick reminder Recap video guide on submitting to Turnitin for students familiar with Turnitin.
- How to find and read GradeMark feedback Full, written guide (Pdf) to where GradeMark feedback is located and how to use the GradeMark system to read your feedback.
- How to find your Turnitin GradeMark feedback Video guide to finding where GradeMark feedback is located.
- How to view GradeMark feedback Video guide to how to interact with GradeMark feedback, from pop-up comments to Rubric cards.

Workshops:

The eLearning Unit run workshops periodically on different aspects of e-submission and e-marking. Go to <u>CLL's event booking website</u> for more information and to book a place on a workshop.

The eLearning Unit run workshops on request for schools and departments on any aspect of learning technologies. Recent popular sessions include GradeMark for electronic feedback and Stream Capture for screen capture and session capture.

Bespoke support

Staff in the eLearning Unit are available to support you with any aspect of planning, implementing, supporting and evaluating e-submission and e-marking. Please contact us at elearning@liverpool.ac.uk

Departmental examples

Alongside this document on the eLearning Unit how to guide website you will find departmental e-submission and e-marking departmental documents from Health Sciences and Philosophy.

Elearning Unit contact information

http://www.liverpool.ac.uk/elearning

elearning@liverpool.ac.uk

Appendix A

Student self-declaration of academic integrity:

The Academic Integrity Policy Guidelines for Students and Staff (Code of Practice on Assessment Appendix L Academic Integrity policy) provides an academic integrity declaration which should be used on all assignments. This can be adapted to create a standard form of text that students can add to an electronic cover sheet when submitting electronically:

https://www.liverpool.ac.uk/media/livacuk/tqsd/code-of-practice-on-assessment/appendix L cop assess.pdf

Appendix B

Electronic alternatives to the current 'yellow sticker' system to indicate allowances by assessors for students with disabilities.

The student declaration on any electronic cover sheet should include the following text:

I confirm that I have a Student Support Information Sheet (SSIS) which recommends "Appropriate marking for spelling and written expression for students with Specific Learning Difficulties"

Guidance for staff:

If a student declares "Appropriate marking for spelling and written expression for students with Specific Learning Difficulties (SpLD's)" on their cover sheet, their work should be marked following the "Guidelines for marking the work of students with Dyslexia and other Specific Learning Difficulties", which can be found at:

https://www.liverpool.ac.uk/media/livacuk/tqsd/code-of-practice-on-assessment/appendix_K_Annexe1_cop_assess.pdf

Once the work is de-anonymised a check must be made to confirm this entitlement by viewing the Student Support Information Sheet (SSIS). The SSIS can be accessed via the Tulip class lists and then selecting the small square icon next to the students name. This will open the SSIS. A recommendation for "Appropriate marking for spelling and written expression with SpLD's" would be located within the "examination" section of the document. In order to retain confidentiality these details can only be displayed in the class lists for modules which staff have associated themselves with in My Teaching Modules. A member of staff can associate him/herself with a module as follows:

- Log into TULIP and go to home/teaching/modules/my teaching modules,
- Select the appropriate term code from the list of sessions if it is not already selected,
- Click on the Create new Teaching Record hyperlink near the top of the screen,

- Select the appropriate level and module code and click the Next Step button,
- Click the Finish button,
- You are now associated with that module.

Appendix C

Standard text that can be used as part of an electronic cover sheet to support agreed mitigating circumstances that an assessor needs to take into account.

*The eLearning unit are currently in negotiation with SAS to agree standard electronic cover sheet text.

Appendix D

Accessibility of Blackboard and Turnitin tools – issues and possible workarounds.

*The eLearning Unit is currently planning this evaluation. More information to follow.

Appendix E

Printing costs:

The following table is a guide to estimating how much it will cost (2016 costs) to print student coursework submissions (i.e. implementing e-submission without e-marking):

Mono			Co	lour			
A4				A4			
Simple	A4	A3	A3 Duplex	Simple	A4 Duplex	A3 Simplex	А3
Х	Duplex	Simplex	Duplex	х	Duplex	Simplex	Duplex
2.6p	2.4p	3.2p	3р	6.2p	5.9p	6.7p	6.4p

For example:

A large cohort of 400 students submitting a 20 page essay would incur (duplex) print costs of some £192 for black and white and some £472 for colour.

Fast printers:

The University has available across the campus 10 fast printers that can be used for coursework submission printing. Please contact the appropriate person to arrange the use of these printers.

V7710600233	Management School	Chatham Street, 2nd floor room 227	Simon Blackman or Luke Dowdall	0151 795 3108 or 0151 795 2565
V7710600231	Architecture	Stirling Gallery 1st Floor, Leverhulme Building, Abercromby Square	Stephen Bretland & Stuey Carroll	0151 794 1154 & 0151 794 2596

V7710600243	English Language Centre	Cypress Building, 3rd Floor corridor, Chatham Street	Tony Dalton	0151 795 0571
V7710600244	School of Medical Education Mbchb	Cedar House, Ashton Street	Rachael Carr	0151 795 4350
V7710600237	Health Sciences (Physiotherapy)	Quadrangle, Brownlow Hill	Sam Noon	0151 794 5795
V7710600227	Health Sciences (Physiotherapy)	Thompson Yates Building, Brownlow Hill	Sam Noon	0151 794 5795
V7710600228	SRAO	1st Floor, Linear Wing, Print Room, Foundation Building, 765 Brownlow Hill	Gill Ledgerton	0151 794 5929
V7710600238	Ground Floor, Sydney Jones Library	Abercromby Square, Grove Wing	Sandie Brunnen	0151 794 2679
V7710600239	Medical Education - Admissions	Cedar House, Ashton Street	Julie Marlow	0151 795 4370
V7710600240	Human Resources	Hart Building, Ground Floor, Reception, Mount Pleasant	Wendy Evans	0151 795 4450
V7710600242	English Language Unit	3rd Floor Cypress Building, Chatham Street	Mark Ingarfield	0151 794 2762
V7710600246	Student Admin & Support	1st Floor, Facetted Wing, Foundation Building, 765 Brownlow Hill	Stephen Ho	0151 794 2430
V7710700090	School of Physical Sciences	Oliver Lodge Complex, 4th Floor, Oxford Street	Angie Reid	0151 794 3358

Appendix F

Electronic management of assessment cycle - information to be added shortly.