Kigali Institute of Science and Technology

Institut des Sciences et de Technologie de Kigali

Avenue de l'Armée, B.P. 3900 Kigali, Rwanda

FACULTY OF ENGINEERING

Department of Mechanical Engineering

BSc Honours Degree in Mechanical Engineering

PROGRAMME SPECIFICATION

(Final)

Revised November 2011

PROGRAMME SPECIFICATION FORM

1. PROGRAMME DETAILS

1 **Programme Title**	**Mechanical Engineering**			
2 **Exit Awards**	**BSc (Hon) in Engineering, Level 5** **BSc Ordinary Degree, Level 4**			
3 **Modes of Attendance** *(please tick)*	Part-time		Full-time	✓
	Distance Learning		Work-based Learning	
	Other (please specify)		Short course	
4 **Resource group**: (See Notes of Guidance)	1		5	✓
	2		6	
	3		Other (write in)	
	4			
5 **First year of presentation**	2008		Current Session (short courses only)	

6 **Programme Organiser/Leader:**	Prof. Minani Longin

7 **Programme Development Team**	
Name	**Faculty**
Prof. Minani Longin (Chair)	FOE
Prof David Gregory Smith (Visiting Professor)	FOE
Dr Kayibanda Venant	FOE
Mr.Mugemangango Norbert	FOE
Mr Munyazikwiye Bernard	FOE
Mr Mosoti Oseko	FOE
Dr Rwigema Anastase	FOS

8 **Faculty/ School/Centre administratively responsible for the programme**

FOE✓ **FOS** **SOLAS** **RITC** **CITT** **CCE**

2. PROGRAMME FUNDING AND NEED FOR RESOURCES (changes since Programme Proposal Form)

See Section 11

Student numbers: Intake per year 60____ into Level 1__

Eventual population, all years: 240_____

3. PROGRAMME AIMS AND RATIONALE (See Notes of Guidance)

This programme specification has been produced to conform to the Rwandan National Qualifications Framework for Higher Education Institutions. Use has also been made of the Standard for Professional Engineering Competence (UK-SPEC) of the Engineering Council of the UK to ensure the proposed curriculum is of an International Standard.

AIMS AND PHILOSOPHY OF THE BSc. in Mechanical Engineering

With the rapid development of infrastructure and industry in Rwanda, there is a growing need for Mechanical Engineering graduates educated to BSc. Honours level. They should have a breadth of knowledge that covers the different aspects of Mechanical Engineering coupled with a deeper knowledge in specific areas. The engineer must be able to apply this knowledge effectively in the engineering design and manufacturing process and to work effectively individually or as part of a team and to make a substantial contribution to that team as a member or leader.

This degree programme aims to address this need and provide an engineering education of an international standard that meets the educational requirement for a professional engineer and so contribute to the aspirations of the **Vision 2020** for the Republic of Rwanda. In its degree programme the Department of Mechanical Engineering aims to be innovative in course and curriculum development.

Educational Aims of the BSc. in Mechanical Engineering

The main objective of the programme is to meet the needs for the present and prospective industrial sectors for skilled graduate mechanical engineers. The programme has the following educational aims:

- To produce graduates with the knowledge skills and personal qualities necessary for them to eventually register and practice as Chartered Engineers after sufficient training in industry, and to make a significant contribution to Industry and Society as professional engineers.

- To enable graduates to exercise of sound judgment, personal responsibility, originality and initiative in making engineering decisions in complex and un-predictable environments.

- To develop students into graduates able and motivated to continue learning throughout their careers to meet the challenges of a changing world.

- To equip students with a good understanding of the principles of mechanical engineering sciences and technologies, some aspects of which will be at the forefront of knowledge of the discipline.

- To produce engineering graduates with the necessary skills to make a significant contribution to design and other team work in an industrial environment.

- To produce graduates of an international standard by meeting the qualification descriptors for Level 5 (Bachelor Degree with Honours) of the Rwandan National Qualifications Framework for Higher Education Institutions.

4. PROGRAMME LEARNING OUTCOMES (include modules not bearing credit)

The programme provides opportunities for student to develop and demonstrate knowledge and

understanding, qualities, skills and other attributes in the following areas. The programme outcomes have been referenced to the Qualification Descriptors for Level 5 (Bachelor Degree with Honours) of the Rwandan National Qualifications Framework for Higher Education Institutions and to the UK benchmark statement for Engineering and the requirements of Engineering professional institutions/bodies defined in UK-SPEC. Thus the Programme is in line with the Bologna Process for Mechanical Engineering.

A. Knowledge and Understanding

At the end of the programme students should be able to demonstrate knowledge and understanding of:

A1. Mathematics and sciences relevant to mechanical engineering.
A2. The fundamental concepts, principles and theories of mechanical engineering.
A3. Energy, design and manufacture at a specialist level.
A4. The principles of design including an awareness of codes of practice.
A5. The professional, legal and ethical responsibilities of a mechanical engineer.
A6. The environmental and social impact of mechanical engineering activity.
A7. Business and management techniques relevant to mechanical engineering.

B. Cognitive/Intellectual skills/Application of Knowledge

At the end of the programme students should be able to:

B1. Select and apply appropriate mathematical methods for modelling and analysing engineering problems.
B2. Use scientific and engineering principles in the development of solutions to problems in mechanical engineering.
B3. Apply engineering knowledge and codes of practice to produce innovative designs of mechanical engineering systems and components.
B4. Critically assess engineering work done by others.
B5. Analyse failures in mechanical systems and devise ways to prevent them.
B6. Apply technical knowledge to produce a technical risk assessment.
B7. Apply professional knowledge to produce a commercial risk assessment.
B8. Apply technical and professional knowledge to assess environmental and social impact of mechanical engineering activities.

C. Communication/ICT/Numeracy/Analytic Techniques/Practical Skills

At the end of the programme students should be able to:

C1. Specify, plan, manage, conduct and report on a mechanical engineering research project.
C2. Prepare technical reports and deliver technical presentations.
C3. Use competently and safely standard engineering laboratory instrumentation.
C4. Observe and record accurately data and experimental evidence both in the laboratory and in the field.
C5. Analyse, evaluate and interpret engineering data and apply them to the solution of mechanical engineering problems.
C6. Plan the installation and maintenance of mechanical engineering plant, systems and equipment.
C7. Demonstrate an awareness of practical mechanical engineering skills.
C8. Use computational tools and packages appropriate to mechanical engineering.

D. General transferable skills

At the end of the programme students should be able to:

D1. Have the capacity for self-learning in familiar and unfamiliar situations.
D2. Undertake life long learning.
D3. Carry out independently a sustained investigation.
D4. Work effectively in a team both as a member or leader.
D5. Efficiently manage both time and resources.
D6. Communicate effectively (written, verbal, drawing, sketching etc.)
D7. Demonstrate general numerical skills and problem solving skills.
D8. Use competently information technology (ICT).

5. PROGRAMME STRUCTURE (include modules not bearing credit)

CODE	Module	Contact Hours	Credit	Level / Semester	Achievement of Level/Programme Outcomes*
YEAR 1 SEMESTER I					
ENG 3101	General English I	72	0	**1 /1**	D6
SST 3111	Study Skills	36	10		C2, D1, D2, D5, D6
MAT 3111	Engineering Mathematics I	36	10		A1, B1, D1, D7
PHY 3112	Engineering Physics	36	10		A1, B2, C3, C4, D1, D7
CHE 3115	Engineering Chemistry	36	10		A1, B2, C3, C4, D1, D7
CIT 3111	International Computer Driving License(ICDL)	36	10		C8, D1, D8
MEE 3111	Engineering Drawing and CAD	36	10		A2, B2, C7, C8, D1, D8
	Total L1 S1	**288**	**60**		
	Hours/week	**24**			
YEAR 1 SEMESTER II					
ENG 3102	General English II	72	0	**1 / 2**	D6
MAT 3121	Engineering Mathematics II	36	10		A1, B1, D1, D7
EEE 3124	Basic Electrical & Electronic Engineering.	36	10		A1, B2, C3, C4, D1
CIT 3121	Computer Programming	36	10		A1, B1, C8, D8
MEE 3122	Engineering Mechanics: Static	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
TWP 3123	Workshop Technology (Mechanical) (Welding and Fabrication)	24	5		A2, B2, C7, D1, D4
TWP 3123	Workshop Technology (Mechanical) (Bench work)	24	5		A2, B2, C7, D1, D4
MEE 3121	CAD and Design Project I	36	10		A2, A4, B1, B2, B3, B4, C2, C7, C8, D1, D4, D5, D6, D7, D8
	Total L1 S2	**300**	**60**		
	Hours/week	**25**			
	Total Level 1	**588**	**120**		

YEAR 2 SEMESTER I					
ENG 3201	English for Science and Technology I	48	0	**2 / 1**	D6
MAT 3211	Engineering Mathematics III	36	10		A1, B1, D1, D7
MEE 3211	Engineering Mechanics: Dynamics	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3212	Fluid Mechanics I	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3213	Engineering Thermodynamics I	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3214	Strength of Materials	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
TWP 3211	Machines Tools Workshop	48	10		A2, B2, C7, D1, D4
	Total L2 S1	**276**	**60**		
	Hours/week	**23**			
YEAR 2 SEMESTER II					
ENG 3202	English for Science and Technology II	48	0	**2 /2**	D6
MAT 3221	Engineering Mathematics IV	36	10		**A1**, B1, D1, D7
MEE 3221	Kinematics of Machines	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3222	Material Science	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3223	Solid and Structural Mechanics	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3224	Production Technology I	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3225	Design and Project II	36	10		A4, B1, B2, B3, B4, B5, B6, B7, B8, C2, C5, C6, C7,C 8, D1, D4, D5, D6, D7, D8
	Total L2 S2	**264**	**60**		
	Hours/week	**22**			
	Total Level 2	**540**	**120**		
YEAR 3 SEMESTER I					
ENG 3301	English for Academic purposes	24	0	**3 / 1**	D6
MEE 3311	Production Technology II	36	10		A2, A3, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3312	Engineering Materials and Metallurgy	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3313	Machine Elements & Design	36	10		A2, A3, A4, B1, B2, B3, B5, D1, D7
MEE 3314	Fluid Mechanics II	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7

MEE 3315	Engineering Thermodynamics II	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3316	Control Systems Engineering	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
	Total L3 S1	**240**	**60**		
	Hours/week	**20**			
	Total Level 3	**240**	**60**		
YEAR 3 SEMESTER II					
MEE 3321	Dynamics of Machines	36	10	**4/2**	A2, A3, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3322	Measurement, Instrumentation and Computer Interfacing	36	10		A2, B1, B2, C3, C4, C7, C8, D1, D7
MEE 3323	Vibrations	36	10		A2, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3324	Design and Project III	36	10		**A2**, A3, **A4**, A5, A6, A7, B1, B2, B3, B4, B5, B6, B7, B8, C2, C5, C6, C7, C8, D1, D4, D5, D6, D7, D8
MEE 3325	Engineering Operations Management (Including Quality Control)	36	10		A3, A5, A6, A7, B1, B2, B6, B7, B8, C6, C7, D1, D5
MEE 3326	Heat Transfer	36	10		A2, A3, B1, B2, C3, C4, C5, C7, D1, D7
	Total L4 S2	**240**	**60**		
	Hours/week	**20**			
	Total Level 4	**240**	**60**		
MEE 3330	**10 WEEKS INDUSTRIAL ATTACHMENT**		**20#**	**Level 5**	B1, B2, C3, C4, C5, C6, C7, C8, **D4**, D5, D6, D7, D8
YEAR 4 SEMESTER I					
ESD 3411	Entrepreneurship Development	24	5	**5 / 1**	A5, A6, A7, B7, B8, C6, D1, D2, D5, D6
CET 3412	Engineering Ethics & Professional Conduct	24	5		A5, A6, A7, B7, B8, C6, D1, D2, D5
MEE 3412	Maintenance Management and Reliability	36	10		A6, A7, B1, B2, **B5**, B6, B7, B8, C6, C7, D1, D2, D5
MEE 3413	Finite Element Analysis and Applications	36	10		A3, B1, B2, C5, C8, D1, D2, D7, D8
MEE 3414	Hydraulics and Pneumatic Systems (Elective)	36	10		A3, B1, B2, C3, C4, C5, C7, D1, D7
MEE 3410	Research Project I	72^{+}	20		A5, A6, A7, B1, B2, **B4**, B6, B8, C1, C2, C4, C5, C7, C8, D1, D2, D3, D5, D6, D7, D8
	Total L5 S1	**252**	**60**		
	Hours/week	**21**			
YEAR 4 SEMESTER II					

FIN 3420	Economics & Finance for Engineers	36	10	**5 / 2**	A5, A6, A7, B7, B8, **C6**, D1, D2, D5
MEE 3423	Turbomachinery (Elective)	36	10		A3, B1, B2, **C3**, C4, C5, C7, D1, D2, D7
MEE 3421	Non-Conventional Energy Resources	36	10		A3, B1, B2, B8, C7, D1, D2, D7
MEE 3422	Computer Aided Design and Manufacturing	36	10		**A3**, B1, B2, **B3**, C7, C8, D1, D2, D5, D7, D8
MEE 3420	Research Project II	72+	20		**A5, A6, A7, B1, B2, B6, B7, B8, C1, C2, C4, C5, C7, C8, D1, D2, D3, D5, D6, D7, D8**
	Total L5 S2	**216**	**60**		
	Hours/week	**18**			
	Total Level 5	**468**	**140**		

Note: Programme outcomes are to be shown in bold. Most outcomes will be achieved, finally, at Level 5, but some may be achieved earlier in the programme.
+ Nominal hours for Level 5 project
# In 2010 credits for Industrial Attachment are zero and total for Level 5 is 120

6. LEARNING AND TEACHING STRATEGY

The basic strategy is to encourage self learning by the student (Learning Objectives, LO D1). This will be achieved by a course in learning skills in the students' first semester, and by ensuring that the contact hours are on average throughout the programme no more than half the notional student learning effort hours of 40 per week (1200 hours over a 30 week year), that is an average of 20 hours per week. In the earlier years it will be a little higher than the average, reducing to the later years to below the average. Thus by the time the student leaves, he/she will be able engage in life long learning (LO D2). In addition the student will be encouraged to make use of the e-learning environment as it becomes available (also LO D8).

The specific methods include:

- **Lectures**, supported by
    - Problem sheets for the student to solve in their own time.
    - Tutorial classes in level 1 to 3, the number per lecture reducing through the levels.
    - Staff office hours in Levels 3 to 5, whereby the staff make themselves available at specific times in their office for students to come and ask questions.

  (LO's A1 to A7, B1, B2, B6 to B8, D1, D2, D7)

- **Laboratory Classes.** Their role is to
    - Illustrate lecture material (LO's A1 to A3, B1, B2)
    - Provide skill in using laboratory equipment and materials and recording data (LO's C3, C4, C7)
    - Analyse data, draw implications, and report the results (LO's A1 to A3, B1, B2, C2, C5, D6)
- **Project Work and Exercises.** These include
    - Essays (LO's A5 to A7, B6 to B8, D6).

- Small projects or exercises (LO's A1 to A3, B1, B2, B4 to B6, C8, D7, D8)
- Design projects which are done in teams and provide an integrating thread for the mathematical and engineering knowledge. These are held in Levels 1, 2 and 4, with the Level 4 design project being of a realistic Mechanical Engineering problem. (LO's A2to A7, B1 to B8, C2, C5to C8, D1, D4 to D8)
- Individual Research Project at Level 5 (LO's A5 to A7, B1, B2, B4, B6 to B8, C1, C2, C4, C5, C7, C8, D1 to D3, D5 to D8)

- **Industrial Visits and Placements** (LO's B1, B2, C3 to C8, D1, D4 to D8)

The pivotal role of Design is taken from UK-SPEC and the practice in many UK Universities.

7. ASSESSMENT STRATEGY

All assessment will be carried out with reference to marking criteria based on the KIST generic marking criteria. Specific marking criteria will be used for the different assessment types and these will use a matrix of elements and marking criteria where appropriate, such as project work. These marking criteria will be given to students so that they know what the examiners are expecting for a given piece of assessed work.

The maintenance of standards will be achieved by second marking and/or moderation of examinations, continuous assessed work and reports, depending on their nature. This will minimise mistakes or bias by any single examiner. Where possible, examinations and other assessments, level progressions and degree classification will be done anonymously to demonstrate impartiality to all students. In addition the overall assessment process will be subject to scrutiny by an external examiner who will provide benchmarking to international standards.

The different teaching methods are assessed as follows:

- **Lecture Modules** (those that are delivered mainly by lectures) will be examined primarily by end of semester unseen examinations, but will include an element (up to 40%) of continuous assessment. The latter may be taken from worked problem sheets, laboratory reports, essays or small project exercises. However most of the problem sheets supporting lectures will be formative as also may be some laboratory reports and essays (particularly at the lower levels). Some of the lecture courses may be examined primarily or completely by assignments, where the nature of the course is unsuitable for assessment by examination, e.g. study skills or computer programming. This strategy will contribute to ensuring the achievement of LO's A1 to A3, A5 to A7, B1, B2, B5 to B8, C2 to C7, D1 to D3, D6 to D8.
- **Design Projects**. These will be examined by a group written report and a group presentation. The report and presentation will be constructed so that individual contributions both to the technical work and team working will be identifiable. The assessment will contribute to LO's A2 to A7, B1 to B8, C2, C5 to C8, D1, D4 to D8.
- **Individual Research Project.** This will be assessed by a written report, presentation and oral examination, thus contributing to the LO's A5 to A7, B1, B2, B4, B6 to B8, C1, C2, C4, C5, C7, C8, D1 to D3, D5 to D8.
- **Industrial Visits and Placements.** These will not normally be assessed summatively (they will be formative), but attendance and in some cases a satisfactory report may be required as a condition of progression, LO's B1, B2, C3 to C8, D4 to D8.

The individual module contributions to the Learning Objectives will be specified in each module specification, so that the higher level skills are demonstrated at the higher levels of the degree

programme. A curriculum map for Modules and Learning Outcomes also shows the specification.

To guard against cheating, all end-of-semester examinations will be held under strict examination conditions in accordance with University requirements. It is impossible to completely prevent students collaborating on continuously assessed work, and indeed students helping each other is one of the most effective methods of student learning. However students will be made aware at the start of any module to what extent collaboration is desirable, and checks will be made by the relevant staff to ensure that direct copying is minimised. Similarly students will be made aware of what constitutes plagiarism, particularly in respect of essays and the Design Projects (Level 1, 2, 4) and Level 5 Research Project. Presentations and oral examination will help to make plagiarism apparent, but where appropriate, examiners will use other techniques such as internet searching and text comparators.

8. STUDENT PROFILE

As Mechanical Engineering is concerned with the application of science, students must have an aptitude for Mathematics and Science and also an interest in creative applications to the design, manufacture and analysis of components, machines and systems.

9. SPECIFIC ADMISSION CRITERIA

Candidates for admission to the Mechanical Engineering Programme are expected to satisfy the general admission requirement of the Institute as specified in the academic regulations. Students will be selected on the basis of their performance in the Rwandan National Examination (A Level) with the option of Science especially **Mathematics-Physics** or its equivalent for candidates coming outside Rwanda.

10. STRATEGY FOR STUDENT SUPPORT

Each Year will be allocated a year tutor. The year tutor will meet with the students at least three times in a semester, and be available for consultation by the students, either individually or together. This will enable the tutor to discover how the students are progressing, and to offer both academic and pastoral support should that be needed. The tutor will review the end of semester examination results with the students at the start of the following semester. In Levels 3 and 4, the meetings will take place less frequently, but at least twice a semester, as the student becomes more mature and independent in the learning process. In Level 5 although the tutor will still take an interest in the student, the main contact of the student with a staff member will be with the research project supervisor. The supervisor will meet weekly with the student to provide support and guidance through the project work.

Specific subject support will be available to students through the lecture tutorial support and the staff office hours as specified in the Learning and Teaching Strategy. There will be additional pastoral support through the University student support services, which the students will be encouraged to use if necessary.

Provision for students with disabilities will be catered for on an individual basis and with advice from the University student support services. One of the female members of staff will be appointed as the gender discrimination officer for the department (or faculty), and she will address any problems experienced by female students in the area of gender bias, discrimination or harassment.

11. PROGRAMME-SPECIFIC NEED FOR RESOURCES AND UNUSUAL DEMANDS ON UNIVERSITY RESOURCES

Following the departure of several staff, including four of the senior staff, in the last year, the most urgent need is for staff both for replacement and bringing the number up to a level to provide good quality teaching.:

- Associate Professor / Senior Lecturer level: 2 in the areas of Vibrations & Control, Materials.
- Senior lecturer / Lecturer level: 3 in the area of Thermal & Energy, Design & Production, Dynamics
- Lecturer level: 1 in the area of Design & Production.
- Tutorial Assistant level: 2 in any area
- Technician Level: 4 (preferably one at senior level) – these are required not only for running the laboratories, but also for providing support for the significantly increased role of final year projects
- Secretary or administrator: 1

Note: Typical staff student ratios for Engineering are 1:14. So for 240 students (60 in each year), but allowing for some 1st. Year teaching by other departments, one might expect about 15 staff of Lecturer level and above. At present there are 8 full time.

In order to allow at least one laboratory experiment (a minimum) for each lecture course, an urgent refurbishment of the laboratory is required. Nearly all of the present equipment is not working and needs to be repaired, or in some cases replaced. In addition new equipment and increased laboratory space to house them is required. A detailed report is being prepared

With the growing importance of computers in engineering, a new dedicated laboratory of computers is required to run the Computer Aided Drawing, Design, Computer Aided Manufacturing and Finite Element Analysis courses. In addition a Computer Numerically Controlled machine is required (in two years' time) for the CAM course at Level 5.

Computers for staff and three more data projectors (there is one) are required to allow lecturers for each year to use one. Ideally to aid the running of the department and the production of modern teaching materials, a photocopier is required.

12. STRATEGIES FOR CONTINUOUS ENHANCEMENT AND FUTURE DEVELOPMENT

At the end of each semester there will be a Module Review meeting of all staff in the department to consider the progress of each module. The module leader will gather information from all staff involved in teaching the module and present these to the meeting. This will be considered along with student feedback on the module and the results of the module assessments. At the end of the year any views of external examiners will also be considered. Any module which is not going well will be subject to specific measures for improvement. This may involve changes to the content and timing of the module, the methods used for learning and teaching, the assessment methods and standards, and the physical resources required for the module. The effectiveness of these changes will be considered at the Module Review meeting after the next time the module is given.

At the end of the year a Programme Review meeting will consider the curriculum as a whole, regarding its quality and relevance to the needs of the profession and in the light of changes in technology. An Industrial Advisory panel, consisting of a range of professionals and employers in the Mechanical Engineering profession, together with some of the senior staff in the department will consider the curriculum and offer suggestions and advice regarding the qualities and skills required of graduating students entering the profession. The Advisory panel will have an input into the Programme Review meeting and will also be asked to advise on any changes being considered to the curriculum.

13. STAFF DEVELOPMENT PRIORITIES

The most urgent priority is the equipping of staff to teach in a radically different manner than previously. The course material will be delivered with up to 35% less contact hours; they should teach so that students are encouraged to undertake self learning, and staff expectations of the students should be raised in terms of the initiative, ideas and confidence expected.

A second important priority will be the development of participation by every staff member in design projects, with at least one staff member with specialist design engineering expertise to lead the new vitally important role of design in raising the standard of the course to an international level.

As stated in Section 11, the Mechanical Engineering is critically understaffed, missing several specialisations. Recruitment of some new staff is in progress.

14. ANY OTHER ESSENTIAL INFORMATION

PROVISIONAL APPROVAL

Members of Approval Panel

Role/location		Date
1 Chair (VRA)	Signature	
	Print Name	
2	Signature	
	Print Name	
3	Signature	
	Print Name	
4	Signature	
	Print Name	
5	Signature	
	Print Name	
6	Signature	
	Print Name	
7	Signature	
	Print Name	
8	Signature	
	Print Name	

Seen and noted

Library	Signature	
	Print Name	
ICT	Signature	
	Print Name	
Quality Office	Signature	
	Print Name	
VRAF	Signature	
	Print Name	