

Quality Assurance / Quality Improvement  
Programme for Academic Units  
2002-2003



School Quality Improvement Plan

School of Biotechnology

18 August 2003

## **Contents**

<b>1.</b>	Introduction	(pages 3-4)
<b>2.</b>	Main findings in Self-Assessment and Peer Review Processes	(pages 5-7)
<b>3.</b>	Recommendations for Improvement	(pages 9-14)
<b>4.</b>	Prioritised Resource Requirements	(page 15)
<b>5.</b>	Summary of One-Year Plan	(page 15)
<b>6.</b>	Summary of Five-Year Plan	(page 15)
	Appendix One	(page 16)

## 1. INTRODUCTION

The School of Biotechnology is a strategic unit in the Faculty of Science and Health at Dublin City University. It is located in a new state of the art building that incorporates both teaching and research facilities together with a bioprocessing pilot plant. The School is unique in having Process Engineers, Biochemists, Microbiologists, Geneticists, a Molecular Parasitologist and a Pharmacologist within a single departmental unit, thus encouraging interdisciplinary approaches to teaching and research. In the School there are 17 members of academic staff, 11 technical staff, 1 secretary, 18 Postdoctoral Researchers and 69 Research M.Sc. and Ph.D. students

### **Specific Objectives of the School include:**

- Development of the teaching programme to encompass the strategic plan of the university.
- Expansion of the school research base to foster collaborative links universally and, in particular, with other schools and research centers within the university.
- Encouragement of entrepreneurship – the application of scientific discovery as a product of basic research.

### **Teaching**

The School is solely or jointly responsible for undergraduate and postgraduate programmes with student numbers in excess of 850.

The flagship undergraduate degree in the School is the B.Sc. degree in Biotechnology. The B.Sc. degree in Analytical Science is run jointly with the School of Chemical sciences.

Other degree programmes into which members of the school teach include:

BSc in Chemical & Pharmaceutical Sciences,  
BSc Science International,  
BSc Science Education  
BSc in Sports Science & Health  
BEng in Medical Mechanical Engineering  
BSc Nursing.

A new degree, B.Sc in Environmental Science and Health will begin in September 2003 and the B.Sc in Cell and Molecular Biology will start in 2004.

Taught post-graduate programmes include:

Grad Dip/MSc in Biological Sciences,  
Grad Dip/MSc in Instrumental Analysis,  
Grad Dip in Safety & Health  
M.Sc in Science Communication.

In 2003/2004 members of the School will also teach into two new programmes –  
M.Sc in Bioinformatics a joint degree with the School of Computer Science and M.Sc In Science Education.

## **Research**

The School is an active centre of basic and applied research. Members of staff have collaborative links with national and international research laboratories and attract funding from many sources including, The Health Research Board, The European Union, The Wellcome Trust, HEA, The World Health Organisation, Enterprise Ireland, The Irish Cancer Society, The Department of Agriculture, Teagasc and Industry.

The main groups in the School are now affiliated to:

- National Centre for Sensor Research (NCSR)
- National Institute for Cellular Biotechnology (NICB)
- Vascular Health Research Centre (VHRC)
- National Cell and Tissue Culture Centre (NCTCC)

The groups include virtually all members of the School. These centres form the cornerstone of current and future research in the School.

## **Campus companies**

A number of enterprises have developed from the research interests of particular members of staff. City Biologic, a public microbiological testing laboratory, was initiated in the late 1980's, followed by the campus companies Archport, Ildana and BioObservations.

## **Approach Taken in drafting the Quality Improvement Plan**

The Peer Review Group Report for the School of Biotechnology was received in May 2003.

1. The Report was immediately distributed to all Staff
2. Comments and feedback were invited from the staff through members of the School Quality Co-ordinating Committee.
3. The final report was compiled by the Head of School and circulated to the Quality Committee for final comment.

## **MAIN FINDINGS IN SELF-ASSESSMENT AND PEER REVIEW PROCESSES**

**The main findings of the Peer Review Group (PRG) are described under five headings as follows:**

### **Management Structure**

In terms of management structures and processes, the University is going through a period of radical change. The PRG is of the view that the sooner the new faculty management structure (and thus that at school-level) is agreed and implemented the better. The current uncertainty is unsettling for staff in the School of Biotechnology and this is making the task of managing the School more difficult. An important objective of any new school management structure must be the achievement of a high degree of involvement and communication across the multiple groups that exist in the school.

Because of the tight time constraints on the review process, there was no opportunity to systematically explore the relationships between the school and its associated research-centres. However, the PRG agrees with the opinion expressed by many staff members that academic staff and postdoctoral researchers in the various centres should be actively involved in the teaching mission of the school... “Good researchers usually make good teachers...every researcher should do some teaching.” Suitable financial/budgetary arrangements would need to be put in place to facilitate this.

There is a pressing need for an uncomplicated and transparent ‘system’ for calculating and assigning staff workloads. This system would need to take into account the wide variety of activities that need to be covered (INTRA, course ‘marketing’, health-and-safety, new course development etc.), in addition to the teaching and research functions of the school. The PRG realises that this is somewhat of a “holy-grail”...perfection will never be achieved! But some moves in this direction are needed.

### **Programmes and Instruction**

The School of Biotechnology is involved in teaching undergraduate degree and diploma programmes and also in taught postgraduate degree programmes. Graduates and students at all levels confirmed that the School staff were ‘very approachable’ and ‘student-friendly’. The PRG compliments the School on the introduction of effective innovative teaching methods, such as peer-tutoring and e-learning and urges the School to extend their use as widely as possible.

The School’s flagship course is the B.Sc. in Biotechnology. The PRG notes that this received praise from previous graduates and the School should feel justifiably proud of this course and its rigorous attention to the practical aspects of the subject. However, levels of recruitment, entry standard and student retention give cause for concern. Some of the causes of these problems lie beyond the School’s control, but they are not helped by an external portrayal to potential applicants that emphasizes the biological aspect of the course and downplays the considerable engineering component. This results in the recruitment of students with inappropriate qualifications and expectations, causing problems, particularly in the second year, where demanding courses, notably in chemistry, make no concession to the non-specialist. New courses are proposed at B.Sc. and M.Sc. level.

The reasons behind the introduction of the new courses are clear, but without the provision of significant additional resources, the PRG fears for their sustainability and for the long-term viability of the School. In view of the problems in maintaining the quality of student intake to undergraduate courses, the PRG urges the School to consider the development of courses at M.Sc. level, where the quality of entrants may be more easily controlled. In this respect, the PRG notes the favourable comments of the students enrolled on the M.Sc. in Biological Sciences.

The School has a large cohort of postgraduate students, whose representatives provided the PRG with a well-prepared and cogent account of issues that need to be addressed. The PRG largely agrees with the postgraduate students that urgent attention is needed here.

These issues include:

- The need for transparency in the allocation of demonstrating duties and in the mechanism for its remuneration.
- The need for a system to ensure that University procedures for progression from M.Sc. to Ph.D. are followed and monitored.
- The need for postgraduate training with an appropriate induction programme for both research and teaching.
- The rules and regulations relevant to postgraduate students should be clearly laid out in a university postgraduate handbook that provides guidance on what the postgraduates can reasonably expect from their supervisors and *vice versa*.
- Support mechanisms need to be provided for 4<sup>th</sup> year postgraduate students whose PhD programmes cannot be completed within the three years normally funded.
- Security and out-of-hours access to facilities should accommodate the needs of research postgraduate students.
- When information is provided to/by the School, postgraduate students need to be included in the distribution lists.

### **Scholarship and Research**

The School of Biotechnology has promoted excellence in scholarship and research since its foundation in 1980. This is evidenced by the fact that the first Ph.D. graduates from DCU, in 1985, came from the school of Biotechnology. Currently, 69 postgraduate students are engaged in graduate research under the supervision of School academic staff. All academic staff are research active and the School has reason to be proud of its high complement of M.Sc. and Ph.D. and post-doctoral researchers, its peer-reviewed publication record, and its proven ability to attract significant national and international research funding.

The varied disciplines and research interests of the School academic staff have allowed the development of significant research strengths in a number of different and relevant fields and have also promoted interdisciplinary and collaborative research activity within the School and other Schools and Faculties within DCU. Members of staff also have active collaborative links with researchers in other Universities and Research Institutes both within Ireland and abroad.

Members of the School of Biotechnology have played a central role in the submission of DCU proposals to the HEA PRTLTI funding programme, which resulted in the establishment of the National Centre for Sensor Research (NCSR) and the National Institute of Cellular Biotechnology (NICB) in 1999 and 2000, respectively. Staff from the School are engaged in the supervision of postgraduate and postdoctoral researchers in the NCSR and the NICB and benefit from the facilities, equipment and specialist technical support provided under the PRTLTI funding. The establishment of the National Cell and Tissue Culture Centre (NCTCC) in DCU in 1987 and its subsequent growth and development of expertise in oncology and cell culture also facilitates and supports the research of school academic staff and their postgraduate and postdoctoral researchers. Involvement of School staff in the Vascular Health Research Centre (VHRC) enhances the interdisciplinary nature of ongoing research and provides the opportunity for staff to engage in the exciting new application of proteomic and functional genomic technologies.

The applied nature of the research activities of School academic staff, together with the encouragement of entrepreneurship, has led to the development of campus companies (Archport, Ildana and BioObservations) and the Microbiological Testing Laboratory, City Biologic. The presence of these companies on campus contributes significantly to the research experience of postgraduate and postdoctoral researchers in the School of Biotechnology. Given the applied nature of the B.Sc. in Biotechnology, the presence on campus of these companies also provides a unique experience for undergraduate students to gain an appreciation of their potential careers in Biotechnology.

## **Social and Community Services**

The School of Biotechnology is committed to promoting its activities at local, national and international levels and does so by contributing to a wide range of initiatives including:

- Centre for Talented Youth (CTYI)
- Access Programmes for pupils from disadvantaged areas
- Summer school in Dochas Women's prison in Mountjoy
- Organisation of the National, European and World Biology Olympiads
- Student retention programme developed by the HEA
- Provision of opportunities for second level pupils to access laboratory facilities
- Supporting the Biotechnology elements for the Pfizer Science bus for primary schools
- Participation in public lectures and exhibitions
- Visits to schools
- Involvement with Young Scientist Exhibition (judges and interactive stand)
- Involvement with RDS Youth Science Programme (Irish Times RDS lectures, Busary Lectures, Science week, London International Youth Science Forum)

Members of the school are also involved in consultancy work, have engaged in on-site training in industry and have facilitated in-service training for Biology secondary school teachers. In addition, all members of staff are contributors/participants at the DCU Open Day.

All of these activities serve to encourage potential young scientists and afford an excellent opportunity to recruit new students into the School of Biotechnology. In the light of the current fall-off in students taking Science, Computer and Engineering subjects at third level, it is particularly important that all activities targeted at promoting interest in Science and Technology among young people continue. The PRG encourages the provision of resources to work with second level students and would like to see due recognition awarded to members of the School providing such community service.

## **Staffing, Accommodation & Resources**

### ***Staffing***

The total staff complement now stands at 57, of whom 30 are permanent. The School is unique in having a multi-disciplinary team comprising Process Engineers, Biochemists, Microbiologists, Geneticists, a Molecular Parasitologist and a Pharmacologist all working within a single unit and servicing the needs of 443 (FTE) undergraduate and postgraduate students.

Among the academic staff the senior:junior ratio is about 59:41 against a background University agreed ratio of 60:40. Two of the senior staff are at full professorial level and two are at associate professor level with a further six at senior lecturer level. There are concerns re academic staff promotion opportunities to senior lecturer level arising from the 60:40 ratio block and the PRG is of the view that this ratio is archaic and should be reviewed to allow able young lecturers with high profile to progress their careers. Without some movement on the overall ratio there is a real risk that some of them will leave and they may not be readily replaced. It was also noted that promotion to Associate Professor level, when it does occur, tends to be based primarily on Research capability, possibly because it is easier to measure. In the opinion of the PRG, there is a real need to rate teaching, administration and student support on an equivalent basis when considering candidates for promotion.

Another PRG concern is the academic staff age profile. With the majority in the 40-50 age group it is envisaged that as many as two thirds of the academic staff will retire within a 10 year period leaving a potential experience gap if succession planning is not carefully managed.

The technical staff comprise of one Laboratory Attendant, 10 Technicians at grade T2 and one Head Technician at grade T3. Promotion opportunities for technical staff are virtually non-existent and some positions, occupied by technicians on temporary contracts, are blocked because permanent staff are on extended leave of absence. While this facility is highly valued by the technical staff and should be continued, the length of the period of absence does need to be managed. The day to day duties of the Technical Staff do not encompass their involvement in Research and this is an area where they could make a significant contribution in the future.

A secretary grade 2 provides local administrative support for the school.

There are eighteen postdoctoral fellows in the School of whom ten are associated with NCTCC (5 permanent and 5 temporary). Typically post-docs are employed on one year contracts; however, it was noted that at least Four of them have been in a post-doc post at DCU for 3 years or more. This raises the thorny issue of entitlements as this group has no security of tenure and no benefits *e.g.* pension, health scheme, bonus scheme. Post-docs are not currently represented at Faculty level or on the University wide Governing Authority and were not included in the recent review of structure by DCU. The PRG recognises the need for the School to attract good researchers to carry out research at the level required in the Research Centres and regards the lack of a career path for Research track people as a risk.

### ***Accommodation***

The School is located in a new spacious and well equipped Biotechnology and Chemical Sciences building on the east side of the campus, which incorporates both teaching, research and office facilities. Teaching is not limited to the rooms in this building but is carried out campus wide. The NCSR occupies new laboratories in the Research and Engineering building – their allocated space consists of specialist equipment laboratories, cleaning rooms, biohazard facility, staff offices, seminar room and project laboratories.

Specialist facilities available to the School of Biotechnology include a Bioresource unit, a state of the art facility for housing laboratory animals, a radiation suite, designed to meet international specifications for safety, and a Bioprocessing pilot plant.

The main concern expressed by staff was in relation to the lack of a common room area but it is believed that this problem could be addressed within the space currently available. Some comments were also noted regarding poor standards of building maintenance.

### ***Resources***

The standard of lecture theatres and laboratory facilities is good and the School's students have access to computers in the basement (belonging to the School), the third floor (belonging to the School of Nursing) and in the library. The School's computers, while no longer state-of-the-art, are adequate, though consideration should be given to their replacement in the next year. The School needs to address the loss of the computers on the third floor when the School of Nursing moves to its new building.

The School is served by a University Library that provides an up to date service with good facilities including well-designed computer clusters and teaching/mentoring accommodation. The Library also provides induction in information management to all students in the School and an individualized web-based portal to its services for each student. Other areas, which were commented on favourably by staff members, were the Faculty administration and the INTRA office.

Poor security and lack of 24/7 access to buildings for researchers were issues raised by postgraduate students.



### **3.1 Recommendation concerning shortcomings in services, procedures and facilities which are WITHIN the control of the unit.**

#### **3.1.1 RECOMMENDATIONS ALREADY IMPLEMENTED**

##### **Recommendation 1**

It is important that all activities targeted at promoting interest in Science & Technology among young people continue.

##### **Action taken by the Unit**

In-service training for second level teachers of Biology has taken place. Lectures and practicals have been arranged for Biology teachers and pupils for the coming year.

##### **Recommendation 2**

The PRG urged the School to develop courses at M.Sc level where the quality of entrants may be more easily controlled.

##### **Action taken by the Unit**

Two new M.Sc courses will begin in 2003. The M.Sc in Bioinformatics and the M.Sc in Science Education.

##### **Recommendation 3**

Revision of the 2<sup>nd</sup> year programme with respect to the engineering and chemistry syllabus, without altering the programme objectives."

##### **Action taken by the Unit**

The PRG complimented the School on the introduction of effective innovative teaching methods, such as peer-tutorage and e-learning and urged the School to extend their use as widely as possible. Considerable progress has been made in this regard:

- A member of staff in Biotechnology has been appointed as a Teaching and Learning Fellow with a specific remit to develop Peer Tutoring.
- Tutors have been appointed for the coming academic year for tutoring of 2<sup>nd</sup> year students in engineering and chemistry.
- A supervisor has been appointed to help to manage the Peer Tutoring.
- An extended training programme has been developed, and an external expert trainer appointed to run the training.

Peer tutoring is being promulgated university-wide and a support network in Peer Tutoring is being developed.

##### **Recommendation 4**

The day to day duties of the technical staff do not encompass their involvement in Research

##### **Action taken by the unit**

Members of the technical staff have been invited and encouraged to work on research projects of their choice in the School

### **Recommendation 5**

High drop out and failure rates in first year and high failure rates in second year of Biotechnology degree courses.

#### **Action taken by the Unit**

- We have remodelled the Biology components of first year to provide a more focused, relevant and integrated introduction to Biotechnology that should be more motivating for the students.
- Peer tutoring is being developed and refined to provide more student support.
- We are in discussion with staff from the Schools of Mathematics, Physics and Chemistry as to how modules from these schools may be improved.

The withdrawal and failure rates in first year and failure rates in second year of Biotechnology degree course are higher than we would like. Withdrawal is particularly difficult to examine as many students who withdraw do so long before they formally withdraw from the university, and it is often difficult to interview them to find out the reasons why. In conjunction with the First year student Retention officer and the Education and Management Analysis unit, we are developing a longitudinal study to attempt to determine the factors associated with withdrawal and progression.

### **Recommendation 6**

Ensure that the regulations governing progression from M.Sc. to Ph.D. are understood and implemented within the School by staff and that graduate students are correspondingly informed.

#### **Action taken by the Unit**

An indicative timetable/ flowchart for postgraduate progression has been compiled and submitted for comments before its adoption. The procedure will encompass a set time frame for submission of transfer material and compliance with the requisite regulations.

### **Recommendation 7**

Postgraduate students should be consulted more inclusively on matters that directly affect them. When information is provided to/by the School, postgraduate students need to be included in the distribution lists.

#### **Action taken by the Unit**

Postgraduate representatives are elected and attend regular School meetings. It is the responsibility of the representatives to convey information pertaining to the post-graduate students to and from a school meeting. All information relevant to postgraduate students is also sent via a postgraduate mailing list which has recently been updated.

### **Recommendation 8**

Support mechanisms need to be provided for 4<sup>th</sup> year postgraduate students whose PhD programmes cannot be completed within the three years normally funded.

#### **Action taken by the Unit**

There are no specific funds for such mechanisms and it is the primary responsibility of the particular research supervisor to ensure adequate funding. However School policy is to support students in these circumstances where possible by tailored demonstratorships and support teaching allocations etc.

### **3.1.2 RECOMMENDATIONS TO BE IMPLEMENTED WITHIN ONE YEAR**

#### **Recommendation 1**

There is an urgent need for a coherent overall management structure for the school.

#### **Action to be taken by the Unit**

The School of Biotechnology is part of the Faculty of Science and Health which is currently being established as an executive faculty. A constitution has been drawn up by the Executive Dean which will deal with many issues including the management of the Faculty. When the constitution has been adopted a management structure for the School will be drawn up bearing in mind the role of school members in management at Faculty level. The new management structure will encourage real involvement from all members of the school – academic staff, technicians, post-docs and post-grads.

#### **Recommendation 2**

There is a pressing need for an uncomplicated and transparent ‘system’ for calculating and assigning staff workloads.

#### **Action to be taken by the Unit**

A formula for calculating workloads for the academic members of staff will be devised following discussion at School level. Loads will be calculated based on teaching, research, administration and community service. Advances in the calculations of workloads have been made for the technical staff and an agreed duties schedule for each semester has been achieved for each individual. Further discussions need to take place with regard to the role of technical staff in the research activities of the school to include the appointment of dedicated technicians to specialised pieces of equipment.

#### **Recommendation 3**

Ensure that clarity and fairness in the allocation of practical demonstration duties of postgraduate students is implemented and that an equitable and transparent remuneration system is put in place.

#### **Action taken by the Unit**

The allocation of demonstrating hours will be discussed prior to the beginning of the academic year. In allocating hours agreement will be reached between the researchers and the Head of School with regard to payment and duties to the School.

#### **Recommendation 4**

The PRG noted that while the undergraduate students have access to PowerPoint they do not seem to be able to use it via data projection for their presentations

#### **Action taken by the Unit**

Staff will seek to book projection facilities for undergraduate Power Point presentations.

#### **Recommendation 5**

An induction programme for postgraduates, with the provision of a Postgraduate Handbook, should be provided. This would create the opportunity for postgraduates to gain experience of research techniques and develop expertise with specialist equipment, while also providing the training needed for their role as undergraduate practical demonstrators.

#### **Action taken by the Unit**

A pilot orientation programme will be offered by the University this Autumn to the post graduate students attending taught programmes. It is recommended that this programme be extended to accommodate the research post-graduates.

### 3.1.3 RECOMMENDATIONS TO BE IMPLEMENTED WITHIN 5 YEARS

#### **Recommendation 1**

Academic staff and postdoctoral researchers in the various centres should be actively involved in the teaching mission of the school

#### **Action taken by the Unit**

The considerable contribution from research to teaching is recognised. A mechanism will be put in place by using suitable financial/budgetary arrangements to facilitate researchers in the associated research centres contributing to the teaching programme in the School.

#### **Recommendation 2**

Dedicated technical staff should be put in place to oversee specialist facilities and equipment.

#### **Action taken by the Unit**

While individual technicians are currently responsible for various pieces of instrumentation, the appointment of dedicated technicians to specialist facilities and equipment will be addressed.

### 3.2 RECOMMENDATIONS CONCERNING SHORTCOMING IN SERVICES, PROCEDURES AND FACILITIES WHICH ARE OUTSIDE THE CONTROL OF THE UNIT

#### 3.2.1 RECOMMENDATIONS ALREADY IMPLEMENTED

##### **Recommendation 1**

Post-docs are not currently represented at Faculty level

##### **Action taken by the Unit**

There will be post-doc representation in the new executive Faculty Structure.

##### **Recommendation 2**

Revision of the 2<sup>nd</sup> year programme with respect to the chemistry syllabus, without altering the programme objectives.

##### **Action taken by the Unit**

Discussions have taken place with the School of Chemistry regarding possible alternatives to 2<sup>nd</sup> year Organic Chemistry.

### **3.2.2 RECOMMENDATIONS TO BE IMPLEMENTED WITHIN ONE YEAR**

#### **Recommendation 1**

There is also a need to review security particularly at night when students are working alone in the building. It is understood that a new after hours policy has just been launched – it is recommended that feedback is sought on this policy when it has been in operation for about 6 months to determine if it has been effective in addressing the concerns expressed by postgraduates within the School.

#### **Action taken by the Unit**

While a new out of hours policy is in place, the post-graduate students in particular continue to have concerns about the system. Given that the School is in the same building as Chemical Sciences these issues will be raised at Faculty level with a view to improving the system.

#### **Recommendation 2**

Provision of administrative support within the School for externally funded research projects was identified. From the discussion with the newly appointed Executive Dean, the PRG understood that it is the intention to introduce such support at faculty-level in the (yet-to-be-agreed) new faculty structure.

#### **Action taken by the Unit**

It is intended that the integrated approach to administration currently in place in the Faculty will be extended to the secretarial support provided to Schools so that the Faculty is supported in the most efficient and effective way possible.

#### **Recommendation 3**

The rules and regulations relevant to postgraduate students should be clearly laid out in a university postgraduate handbook that provides guidance on what the postgraduates can reasonably expect from their supervisors and vice versa.

#### **Action taken by the Unit**

Currently there is a lack of a postgraduate booklet outlining the rules and regulations governing postgraduate students. A handbook will be drawn up which clearly outlines what postgraduate students can reasonably expect from their supervisors, and *vice versa*, at a school level and also from other university departments such as the registry. This handbook should seek to provide guidance on aspects of postgraduate life within not only the school but the university as a whole.

### **3.2.3 RECOMMENDATIONS TO BE IMPLEMENTED WITHIN FIVE YEARS**

#### **Recommendation 1**

The current target senior: junior academic staff ratio (40:60), which is operated on a University wide basis is an unreasonable constraint on academic staff promotion and is leading to a lowering of morale within the School.

#### **Action taken by the Unit**

The allocation of staff to the School is carried out at University/Faculty level. The School will strive to ensure that promotional opportunities in the School of Biotechnology are maximised in order to retain high calibre staff.

#### **Recommendation 2**

Promotion opportunities for technical staff are virtually non-existent

#### **Action taken by the Unit**

A new structure will be put in place at Faculty level which will provide for promotional opportunities for the technical staff.

### **3.3. RECOMMENDATIONS CONCERNING INADEQUATE STAFFING, FACILITIES WHICH REQUIRE CAPITAL INVESTMENT.**

#### **3.3.1. RECOMMENDATIONS ALREADY IMPLEMENTED**

None

#### **3.3.2 RECOMMENDATIONS TO BE IMPLEMENTED WITHIN ONE YEAR**

##### **Recommendation 1**

"More accurate portrayal of course content and objectives in promoting and marketing the programme (A better balance between the engineering, chemical and biological aspects)"

##### **Action to be taken by the Unit**

The promotional literature for the degree of Biotechnology will be examined and amended to provide a more accurate portrayal of course content and objectives in promoting and marketing the programme with a better balance between the engineering, chemical and biological aspects. The involvement of Biotechnology staff/graduates in marketing the course will be addressed. Second level students and teachers will be invited to visit the School and to attend lectures and laboratory sessions to gain a better insight.

##### **Recommendation 2**

Provision of a designated common room area where all groups within the School can interact socially.

##### **Action taken by the Unit**

The provision of a common room within the School is viewed as very necessary in order to provide a social focal point and to facilitate communication and good working relations between all constituencies of the school – the academic staff, the technical staff and the researchers. Space within the school will be considered for the development of this facility.

#### **3.3.3. RECOMMENDATIONS TO BE IMPLEMENTED WITHIN FIVE YEARS**

##### **Recommendation 1**

"In general the teaching and research facilities available are excellent but some consideration should be given to replacement of the aging computers in the School within the next year and the replacement of the IT facility on the third floor when the School of Nursing moves to its new building."

##### **Action to be taken**

The need for adequate computing facilities will increase with the introduction of the M.Sc in Bioinformatics. It is planned to invest in new hardware, up to 25 new computers and new software in the next few years.

##### **Recommendation 2**

The lack of a career path for Research track people is a risk.

##### **Action taken by the Unit**

The establishment of a scheme which specifies benefits and entitlements for postdoctoral researchers is being actively pursued at University level. The School will do all it can to facilitate the establishment of such a scheme.

#### **4. PRIORITISED RESOURCE REQUIREMENTS**

- Replacement of computers €25,000
- Common Room €4,000
- Capital Equipment for the Pilot Plant €50,000

#### **5. SUMMARY OF THE ONE-YEAR PLAN**

##### **At Unit Level:**

- Management Structure for the School
- Formula for calculating workloads
- Clarity & fairness of the demonstration hours
- Induction programme for postgraduates

##### **At University Level:**

- Review of Security
- University Postgraduate Handbook

#### **6. SUMMARY OF THE FIVE-YEAR PLAN**

- To optimise promotional opportunities for Academic Staff.
- Promotional opportunities for Technical Staff
- Involvement of researchers in the associated research centres to contribute to the teaching programme.
- The appointment of technicians to oversee specialist facilities and equipment.

## **APPENDIX ONE**

### **UNIT QUALITY COMMITTEE GROUP (for the Self-Assessment Report)**

Dr. Brid Quilty (Head of School; Chairperson of Quality Committee)  
Dr. Patricia Carty (Head Technician)  
Dr. Stephen Daly (Postdoctoral Fellow)  
Dr. Ciaran Fagan (Lecturer)  
Dr. Michael Parkinson (Lecturer)  
Dr. John Tobin (Senior Lecturer)  
Dr. Cormac O’Cleirigh (Postgraduate Student)  
Dr. Jane White (Research Assistant)  
Ms. Barbara Drew (School Secretary)

### **PEER REVIEW GROUP**

Prof. Emer Colleran, Head, Department of Microbiology, National University of Ireland, Galway [Chair]  
Prof. Andrew Booth, Professor of On-line Learning, Faculty of Biological Sciences, University of Leeds  
Dr. Barbara Cantwell, Operational Risk Manager, Diageo Ireland, Dublin  
Prof. Tony Moynihan, School of Computer Applications, Dublin City University  
Ms Muireann Ní Dhuineáin, Careers & Appointments Officer, Student Affairs, Dublin City University  
[Rapporteur]

### **UNIT QUALITY COMMITTEE (for the Quality Improvement Plan)**

Dr. Brid Quilty (Head of School; Chairperson of Quality Committee)  
Dr. Patricia Carty (Head Technician)  
Dr. Stephen Daly (Postdoctoral Fellow)  
Dr. Ciaran Fagan (Lecturer)  
Dr. Michael Parkinson (Lecturer)  
Dr. John Tobin (Senior Lecturer)  
Dr. Cormac O’Cleirigh (Postgraduate Student)  
Ms Fiona Flood (Secretary)