

[Note: Contact your Academic Services Manager or APC Faculty Representative for assistance with this form.]

ACADEMIC PROGRAMMES

New Academic Developments: Approval in Principle

Faculty:	Science		
Programme Title:	Postgraduate Certificate in Health Sciences (Drug Development Science) Postgraduate Diploma in Health Sciences (Drug Development Science)		
Proposed Commencement Date:	Sem 2 2004	Contact Person:	A/Prof Nick Holford

1. Overview

Provide a brief overview of the proposal.

The formal study of the scientific basis for drug development is a growing academic discipline. Courses in drug development science will provide an opportunity for advanced study and research that is directly applied toward the clinical development of new medicines. A major aim of the courses is the development of graduates with the ability to enhance the process of drug development and with a strong capability in research.

2. Strategic Rationale

Discuss how the proposal helps meet:

- *The University's Mission Goals and Strategies*
- *The Faculty's Academic and Resource Plan*

What would be the consequences of NOT proceeding with this development?

University Mission Goals and Strategies: This proposal will encourage participation in University teaching programmes from graduates working in the pharmaceutical industry. The pharmaceutical industry has strong economic and technological impact in New Zealand and internationally. It will therefore enhance the position of The University of Auckland as a university of high international standing, recognised for excellence in teaching, research and administration, innovative contribution to the advancement of knowledge, and service to its local, national and international communities Faculty Academic and Resource Plan: The proposal is compatible with the FMHS Academic and Resource Plan.

The consequences of not proceeding with this development would be the loss of intellectual capital among those who are currently interested in a career in drug development. The University would also lose a source of income from student fees.

3. Consultation

Confirm that:

- (a) *Other Faculties potentially affected by the introduction of this programme and allied institutions (where required in terms of the University's agreement with them) have been consulted and*

summarise the outcome of that consultation;
(b) *The relevant professional, industry and community groups have been consulted and summarise the outcome of that consultation.*

(a) No identifiable effect on other faculties or allied institutions have been identified. There are no programmes being taught in New Zealand on drug development science.

(b) A workshop was held in December 2002 with the medical directors and staff from three major pharmaceutical companies (Merck, Sharpe & Dohme, Novartis, Pharmacia), the principal of a medical writing business, a paediatric intensivist involved in drug related research and members of the Department of Pharmacology and Clinical Pharmacology. This workshop confirmed the need for postgraduate teaching in drug development science (*Table 1*). The numbers in this table are the estimated sustainable numbers of students who would be interested in joining one of the programmes outlined in this proposal.

Table 1 Potential Student Numbers

<i>Source</i>	<i>Numbers/Year</i>	<i>Comment</i>
<i>From other UoA programs</i>	<i>2</i>	
<i>Major Pharmaceutical Industry</i>	<i>6</i>	
<i>Minor Pharmaceutical and associates</i>	<i>0.5</i>	<i>e.g. Neuronz, Uniservices, Investment banking</i>
<i>Regulators/Ethics</i>	<i>1</i>	
<i>Clinical Investigators and associates</i>	<i>2</i>	
<i>Veterinary Pharmaceuticals</i>	<i>0.5</i>	
<i>Total</i>	<i>12</i>	

Discussions with potential students at the workshops have indicated that they expect to be able to attend courses taught during the day by getting a release from their full-time jobs.

4. Treaty and Equity

Discuss the relationship with, and the impact on, the Faculty's Treaty and equity goals and strategies.

No identifiable impact on the Faculty's Treaty and equity goals and strategies.

5. Demand

(a) How is it expected that the size and scale of the programme will grow in the medium to long term?

(b) What is basis on which demand for the programme (including demand for graduates from the programme) has been established?

(c) To what extent are the projected EFTS:

- new to the University, or*
- expected substitutions from existing programmes in the Faculty or elsewhere in the University? (stat the programmes from which it is expected that EFTS will be drawn).*

(a) Enrollment is likely to grow with the pharmaceutical (including biotechnology) industry.

(b) At the workshop held in December 2002 it was estimated that a total of 12 students per year would wish to enroll in courses in the area of drug development science.

(c) The projected EFTS expected to enroll in the PGDipHSc (Drug Development Science) specialization will be about 5 per year (see *Table 1*).

10 students per year are expected to be new to the University. 2 students in existing programmes such as MSc, MHSc, PGDipSci may wish to enroll in the Drug Development Science specializations of PGCertHSc or PGDipHSc.

(d) Provide, with supporting rationale, a detailed projection of EFTS.

EFTS Description/Category (Total EFTS)	Year 1	Year 2	Year 3	Year 4	Year 5
TOTAL EFTS:					
	Year 1	Year 2	Year 3	Year 4	Year 5
EFTS Description/Category (New EFTS)					
PGCertHSc (Drug Development Science)	2.5	2.5	2.5	2.5	2.5
PGDipHSc (Drug Development Science)	2.5	2.5	2.5	2.5	2.5
TOTAL EFTS NEW TO THE UNIVERSITY: 5					
Rationale: The figure for 5 new EFTS comes from discussions with the pharmaceutical industry. It assumes these students will take courses on a part time basis (one course per semester). We currently have no students enrolled from the pharmaceutical industry. We have run three successful half-day workshops on drug development science in 2002 and 2003 which were attended by 25-30 people from the industry. Many expressed an interest in participating in a formal programme of study in drug development science.					

6. Competition

Discuss competing or overlapping programmes offered:

- in Auckland, and
- elsewhere in New Zealand, and
- by distance

by:

- institutions allied with The University of Auckland, and
- other institutions

How large, in aggregate, are competing or overlapping programmes, and what position in this market is it expected that this programme will take?.

There is some minor overlap with the Medicinal Chemistry courses offered by the Faculty of Science (Discussion with Professor Margaret Brimble, Dept Chemistry).

CHEM 390 (2 Points)

Medicinal Chemistry

Nature of cellular targets for drug action – lipids, proteins, enzymes, DNA. Principles of molecular recognition. Enzymes and receptors as targets for drug action. DNA as a target for drug action. An overview of approaches to drug discovery and development. Structure-activity relationships, stereochemistry and drug action, prodrugs, drug metabolism and pharmacokinetics, physicochemical properties and drug action, drug resistance. Laboratories focus on the synthesis, computer modelling and biological testing of drugs.

CHEM 735 (2 Points)

Advanced Medicinal Chemistry

Anticancer agents. Metals in medicine. Contemporary topics in medicinal and/or bioorganic chemistry.

However the focus of these courses is on drug discovery (synthesis and testing of novel compounds) which is quite distinct from drug development (evaluation of lead compounds for use in humans) . Drug development covers the processes involved in bringing a new compound from first use in humans until use in therapeutics.

We have discussed with the School of Pharmacy (Dr George Hancox, Dr Carol Malcolmson) the potential overlap with the Certificate and Diploma PGHSc specializations in Pharmaceutical Science. We have agreed that both programs may share some common optional courses but the core courses are quite separate. Pharmaceutical Science focuses on the development and manufacturing of new formulations of drugs. It is not concerned with the action of drugs in humans. Drug Development Science deals with the use of new drugs in humans and the evaluation of their potential therapeutic benefit.

7. Funding

Confirm that the proposal has been discussed with the Planning Office and indicate the proposed funding for the programme:

- *MoE funding category (which should be confirmed by the Director of Planning)*
- *Student Fee band*
- *International Student Fees*
- *Other funding*

Outline what avenues have been considered for external funding of the establishment and operating costs of the programme.

The programme is expected to incur minimal new costs. It is based on a re-focussing of existing courses to form a coherent programme.

8. Programme Development

Discuss the cost (including People Costs) of developing the programme and how it is intended that these be met.

The primary cost of programme development is the time of academics who are teaching existing courses.

9. Programme Establishment

Discuss the capital and other expenditure required to establish the programme and how it is intended that these costs be met.

Also outline:

- *the ongoing demand for capital expenditure that the programme will generate*
- *what provision has been made (or will be necessary) for marketing the programme.*

No capital expenditure is required.
Marketing the programme will be done by holding half-day workshops on drug development (as we have done already). These workshops are funded by a donation from participants.

10. Staffing

Discuss:

- *what additional staffing (academic, technical and administrative) will be required, and when, and the extent to which it is intended to rely on existing staffing to deliver the programme;*
- *the rationale for the staff: student ratio proposed for the programme (with reference to appropriate U21 or G8 benchmarks).*

The programme will rely entirely on existing staff.

11. Accommodation

What demand will the programme generate for:

- *Office space*
- *Student study space*
- *Lecture theatres*
- *Tutorial and seminar rooms*
- *Computer laboratories*
- *Other laboratories*
- *Other space*

*To what extent can the Faculty meet these demands from unutilised capacity in space already available to it, and what **additional** space will be sought from the University?*

*When will any **additional** space be required?*

The programme is made up of existing courses. No additional accommodation is required at present. Current courses are taught in rooms which can hold up to 30 students.

12. Information Technology

Discuss the programme's impact in terms of:

- *access to generic computer laboratories*
- *access to special-purpose computer laboratories*
- *acquisition of additional computers*
- *other IT requirements*

Confirm that any implications for the University's data networks have been discussed with ITSS.

No impact is expected beyond current use of IT facilities except in proportion to the number of new EFTS (i.e. an expected increase of 6 in addition to current 14).

13. Library

Confirm that the proposed programme has been discussed with the University Librarian, and that:

- *current Library resources are adequate to support the programme, or*
- *new Library resources required to support the programme can be obtained from funding currently available to the Library before the programme commences, or*
- *additional funding will be required to acquire Library resources to support the programme (in which case, the source of the funding should be identified).*

Current library resources are adequate.

14. Operating Costs

Briefly comment on the major operating costs (not covered above) provided for in the programme and identify whether any vary significantly from Faculty or Department norms.

None.

15. Risk Management

Comment on any significant risks associated with developing, establishing and delivering the programme, and how they will be managed.

None.

16. Conclusion

Are there any other comments or any other information that should be provided at this stage?

This programme is essentially a grouping of existing courses currently contributing to MSc, MHSc and PGDipSci programmes. By refocusing the courses and creating a specific programme we hope to encourage a more systematic approach to intellectual developments in drug development science and increase collaboration between the University and the New Zealand and international pharmaceutical industry.

- a) **Has the Faculty undertaken to resource this proposal from current budget resources or from additional revenue it will generate?**

Yes

- b) **Will the proposal require University funding over and above current Faculty resources or the additional revenue the programme will generate?**

No

Signed:

Dean

Date: ____/____/20____

Note: This AP 01 proposal must be approved in principle by APC **before** submission of the full AP 02 proposal and the Academic Programmes: Resource Statement spreadsheet.