

SECTION 1: ACADEMIC BOARD COURSE PROPOSAL

PART 1: OVERVIEW OF PROPOSAL

Faculty: Science

Department/School presenting the proposal: Physics

Faculty Contact person and/or: Kim Schwieters **Ext.No:** 12203

Academic Proponent: Prof. Clive Baldock **E-mail:** c.baldock@physics.usyd.edu.au

Date course approved by Faculty: 5 December 2006

1.1.1. Type of proposal

New

1.1.2. Type of course

Postgraduate Coursework

1.1.3. Name of New Award courses

Master of Applied Nuclear Science
Graduate Diploma in Applied Nuclear Science

1.1.4. Abbreviated name

MAppNucSci
GradDipApplNucSci

1.1.5. Date of introduction

Semester 1, 2008

1.1.6 Availability to students

Commonwealth supported students	x	Full-time	x
		Part-time	x
Fee-paying local students	√	Full-time	√
		Part-time	√
Fee-paying international students	√	Full-time	√
		Part-time	x

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PART 2: DETAILS FOR ASSESSMENT OF PROPOSAL

1.2.1 Purpose of the proposal

The purpose of this proposal is to introduce two new award courses, a Master of Applied Nuclear Science and a Graduate Diploma in Applied Nuclear Science. The courses are designed to meet the growing needs both within Australia and globally for individuals with a postgraduate education and training in the nuclear sciences.

1.2.2 Justification for proposal

(a) Why the proposal is necessary (for postgraduate offerings, provide academic justification for the positioning of the proposed award course at this level and indicate how the content differs from that in upper level undergraduate award courses in the same field e.g. different levels of rigour, different teaching techniques, greater use of self-directed learning)

The purpose of this proposal is to introduce two new award courses, a postgraduate coursework Master of Applied Nuclear Science and a postgraduate coursework Graduate Diploma in Applied Nuclear Science. The courses are designed to meet the growing needs both within Australia and globally for individuals with a postgraduate education and training in the nuclear sciences. They build upon the Physics major and provide a level and type of specialisation that is not available at the undergraduate level.

(b) The background to the proposal and why is it being put forward

Nuclear science traditionally is a fundamental core part of the undergraduate physics curriculum. Every physics graduate is expected to have a basic knowledge of it. Nuclear science bridges the gap between atomic physics and fundamental particle physics in both of which School of Physics is actively engaged. It is directly relevant to the Institutes of Medical Physics and Astronomy within the School of Physics. Further, nuclear science has direct applications to environmental science, industry, geology, geochronology and cosmo-chronology. Nuclear science is a branch of physics which over the last century has developed to maturity reaching the level of practical and industrial implementation. Its application to different branches of science and industry is so wide that today at least a basic knowledge of nuclear science is essential for almost all science and engineering graduates.

During the last two decades Australian universities have not invested significant resources and infrastructure in the training of nuclear scientists and engineers. A result there is a current and severe shortage of specialists in this field. In Australia, as is the case globally, the requirements and use of the nuclear sciences are currently being reassessed, particularly with the renewed emphasis on global warming and climate change and the need for alternative energy sources. The Australian government is currently undertaking a review of all aspects of the uranium industry in Australia. There is an expectation that this review will recommend establishment of an Australian nuclear industry. Such a recommendation will require the education and training of nuclear scientists in Australian universities. It is expected that government will allocate significant resources for such training courses and the universities that pioneer these efforts will benefit most. Currently Australia is a uranium exporting country and has about 24% of the world's known uranium resources. Australia has the world's largest thorium resources. In the future thorium is likely to be a viable alternative to uranium as a nuclear energy source. Although university graduates with nuclear science knowledge for mining and safe operation of these mines are required, there is little doubt that as a result of the government review, these valuable minerals will not be exported as raw materials but will be processed and converted to nuclear fuel. This will require establishment of a large Australian nuclear industry requiring nuclear science graduates.

(c) The academic rationale for the proposal

The level and type of specialisation offered by this program is currently not available at nor is it suitable for the undergraduate level. The proposed courses will enable students to gain entry into the specialist field of nuclear science.

(d) *The learning and teaching objectives of the proposed course (these should be related to the skills, attributes and knowledge a graduate can be expected to achieve, as listed in the generic attributes of graduates in item 1.2.8)*

The objective is to provide a broad understanding of nuclear science as well as its applications. At the same time the Masters course will provide research experience. The learning and teaching objectives are consistent with the generic attributes of graduates of the University of Sydney in terms of scholarship, global citizenship and lifelong learning. Further, each of these overarching attributes will be in the context of research and inquiry; information literacy; personal and intellectual autonomy; ethical, social and professional understanding; and communication.

(e) *How the proposal relates to the University's strategic plan, goals and priorities and the Faculty plan*

The proposal is consistent with the core principles and purpose of the University of Sydney and its strategic directions for 2006-2010. These are a fundamental moral commitment to intellectual discovery and development, responsible social commentary and the promotion of cultural and economic well being. To this end, humane aspirations are combined with a practical business sense to serve the needs of the community while preserving academic freedom. In particular it will contribute to the University's aim to sustain steady growth in the ratio of postgraduate to undergraduate students.

This proposal is consistent with the following strategic goal of the Faculty of Science to develop new postgraduate coursework degrees and undergraduate majors to capture market trends.

(f) *The proposal's relevance to students, employers and professional organisations*

The level and type of specialisation is currently not available at nor is it suitable for the undergraduate level. It will enable students to gain entry into the specialist field of nuclear science and into occupations where knowledge of this field is a prerequisite. It will also provide an opportunity for those already working in the field of nuclear science to gain further experience in this field of science and technology.

(g) *Any implications the proposal may have on the University's existing offerings (e.g. if it contributes to the University's strength in a particular discipline or overlaps with existing University offerings)*

The establishment of a Master of Applied Nuclear Science degree and a Graduate Diploma in Applied Nuclear Science will complement and strengthen the existing Master of Medical Physics degree and Graduate Diploma in Medical Physics through some common units of study. Further, with the introduction of the Master of Applied Nuclear Science and the Graduate Diploma in Applied Nuclear Science new and appropriate units of study will potentially be available for students enrolled in the Master of Medical Physics degree and Graduate Diploma in Medical Physics, and for students enrolled in other coursework programs.

1.2.3 Benchmarking, market research and analysis

(a) *Identify (and list) similar courses offered by other institutions which could be regarded as competition for your proposed course*

The only similar course offered in Australia is a new postgraduate Master of Nuclear Science degree at the Australian National University (ANU). This degree will commence in first semester, 2007.

(b) *Determine in what way your proposal is different from similar courses offered by competitors*

The Master of Applied Nuclear Science degree and the Graduate Diploma in Applied Nuclear Science at the University of Sydney will be of a more applied nature than that being offered at the ANU. Further, they build on the expertise gained through running the Master of Medical Physics degree and Graduate Diploma in Medical Physics at the University of Sydney with the opportunity to share some common units between the disciplines. A further feature of the program will be the unique accessibility, due to geographical location, of the facilities at the Australian Nuclear Science and Technology Organisation (ANSTO) through the Australian Institute of Nuclear Science and Engineering (AINSE).

(c) Ascertain the competitive advantage your proposed course has over its competition

A competitive advantage of the proposal is the unique accessibility, due to geographical location, of the facilities at the Australian Nuclear Science and Technology Organisation (ANSTO) through Australian Institute of Nuclear Science and Engineering (AINSE).

(d) Identify any issues of price sensitivities

Not known.

(i) Benchmarking:

It is not possible to benchmark against another course as no other similar course currently exists.

(ii) Market research and analysis:

The Australian Institute of Nuclear Science and Engineering (AINSE) has consulted (August 2006) all Australian universities through their university delegates and indicated that there is a need for postgraduate courses in nuclear science in Australia.

(iii) Summary table of competitive offerings to proposed award course:

Institute	Competitive Offering	Additional information
Australian National University	Master of Nuclear Science	To commence first semester, 2007

(iv) Estimated Student Demand

Estimated Student Demand	2008	2009	2010
Commonwealth-supported	-	-	-
Local fee-paying	6	10	10
International fee-paying	3	5	5
Estimated Total EFTSU	7.5	12.5	12.5
Lowest EFTSU for which course would be run	5	7	7

Estimated Full-time and Part-time Students	2008	2009	2010
Estimated number of Full-time students	6	6	10
Estimated number of Part-time students	3	3	5

Impact on students currently enrolled:

The proposed course will provide additional choice of units of study for Physics Honours students who currently are allowed to choose up to 2 units of study from the units of study offered to the Master of Medical Physics and Graduate Diploma in Medical Physics students. Further, the proposed course will also potentially provide a wider choice of units of study for Master of Medical Physics students and Graduate Diploma in Medical Physics students.

Enrolment Quotas:

Will quotas be set for the proposed award course or for any units of study within the award course?

For local fee-paying students: No

For international fee-paying students: No

1.2.4 Consultation and External References

Consultees	Date of consultation	Method of consultation	Type of supporting evidence provided
School of Chemistry	July-October 06	Email	Letter of support
School of Medical Radiation Science	July-October 06	Email	Letter of support
AINSE	July-October 06	Email	To be supplied
ANSTO	July-October 06	Email	To be supplied
Australian Institute of Physics (AIP)	October 2006	Email	To be supplied

1.2.5 Course structure

(a)

Award Course	Length of candidature (years)	Type of Enrolment	
		Full-time	Part-time
Master of Applied Nuclear Science	Minimum	1.5	4
	Maximum	2	3
Graduate Diploma in Applied Nuclear Science	Minimum	1	2
	Maximum	2	3

Proposed course structure

Code	Name	Credit Value	Unit Type
PHYS5011	Nuclear Physics*	6 points	Core
PHYS5012	Radiation Physics and Dosimetry*	6 points	Core
PHYS5013	Nuclear Instrumentation	6 points	Core
PHYS5014	Applications of Nuclear Physics	6 points	Core
PHYS5015	Reactor Physics and Systems	6 points	Core
PHYS5016	Nuclear Chemistry and Nuclear Fuel Cycle	6 points	Core
PHYS5017	Energy Options and Environmental	6 points	Core
PHYS5018	Health Physics and Radiation Protection*	6 points	Core
PHYS5019	Research Methodology and Project* [†]	24 points	Core

* These units of study will eventually be common with the Master of Medical Physics degree and the Graduate Diploma in Medical Physics which will subsequently be modified through the submission of an amended course proposal.

[†] This unit will not be available to Graduate Diploma students and only available to Master students.

(b) Minimum credit points required for completion of qualification

72 credit points for Master students, and 48 credit points for Graduate Diploma students.

(c) Mode of delivery

Face-to-face teaching; supervised laboratory exercises; supervised research project

(d) Does the course involve clinical or industrial placement/experience?

Some laboratory work and projects may be undertaken at the Australian Nuclear Science and Technology Organisation (ANSTO) through Australian Institute of Nuclear Science and Engineering (AINSE).

- (e) Please indicate what processes are in place to guarantee the quality of academic staffing, available resources for teaching and provision of adequate curriculum delivery, assessment and authentication of student work.

The Academic Program Committee within the School of Physics will be responsible for these issues.

1.2.6 Assessment procedures

Proposed Regime	Assessment	Proportion of assessment regime (%)	Use of external assessors/examiners (Yes/No) (if yes, please provide details)
Lectures		~45%	
Practical experience		~22%	
Project		~33%	

Please provide justification:

Lectures will have a practical component of approximately 15%. One third of the Masters course is a research project.

1.2.7 Student workload

(a)

Expected Workload	Total Time Expected (per credit point)
Lectures	4 hrs
Tutorials	
Practical experience	2 hrs
Independent study	
Reading and work for assessment	
Others (please specify):	

- (b) Provide an indication of how the academic course load including the weight given to any dissertation component compare with other similar course loads in the faculty/college/university

The workload will be similar to the Master of Medical Physics degree and the Graduate Diploma in Medical Physics.

- (c) What load for HECS and student load purposes should be given to each of the constituent parts or units making up the award course?

0.125 per 6 credit point unit

1.2.8 Attributes of graduates

The learning and teaching objectives of graduates will be consistent with the generic attributes of graduates of the University of Sydney. Specifically, these will be in terms of scholarship, global citizenship and lifelong learning. Further, each of these overarching attributes will be in the context of research and inquiry; information literacy; personal and intellectual autonomy; ethical, social and professional understanding; and communication.

1.2.9 Transitional arrangements (for continuing students)

Not applicable.

1.2.10 Course administration

Course to be administered by the following Faculty: Science

- (a) Is there **shared teaching** with other Faculties? No
- (b) Basis for the above allocation between faculties: Not applicable
- (c) Combined degree – inter-faculty arrangements: Not applicable
- (d) Is the proposed award course part of a **con-joint venture** with another institution?
No

1.2.11 Resolutions

- (a) Are there changes to the list of Degrees, Diplomas and Certificates conferred by your Faculty, as listed in the **Resolutions of the Senate** available in the **University Calendar**? Yes (See Appendix 2)
- (b) Will there be new Resolutions or changes to the existing **Resolutions of the Senate** for the proposed Coursework award course? Yes (See Appendix 3)
- (c) Will there be new Resolutions or changes to the existing **Faculty Resolutions** for the proposed award course? Yes (See Appendix 4)
- (d) Will there be changes to the academic dress due to the introduction of the proposed new award course? Yes

1.2.12 Quality assurance arrangements and plans

- (a) *Monitor, measure and achieve quality learning and teaching*

Regular feedback will be sought from students each semester. Students in all units of study will be required to complete anonymous evaluations which will be collated by the Institute of Teaching and Learning. In addition, the lecturer for each unit of study will solicit informal feedback from students on a regular basis throughout the semester. The Academic Program Committee within the School of Physics will oversee these issues.

- (b) *Review content, delivery and Resolutions of the award course*

The content, delivery and Resolutions will be reviewed after 3 years. The Academic Program Committee within the School of Physics will oversee this.

- (c) *Review and rationalise units of study for the award course*

The units of study will be reviewed after 3 years. The Academic Program Committee within the School of Physics will oversee this.

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PART 3: RESOURCE IMPLICATIONS

1.3.1 Estimated Student Numbers for next three years of the award course

Estimated Student Demand	2008	2009	2010
Estimated Student Numbers	9	15	15
Estimated EFTSU	7.5	12.5	12.5

1.3.2 Availability of teaching and support staff

- (a) Availability of academic and support staff to deliver the proposed award course:

An overall course coordinator will be appointed from existing School of Physics staff.

Prof. Clive Baldock is responsible for coordination of the Master of Medical Physics degree and the Graduate Diploma in Medical Physics. He will be responsible for the coordination of units of study on the Master of Applied Nuclear Science (existing or new) which are in common with the Master of Medical Physics degree. New units of study which are unique to the Master of Applied Nuclear Science will be taught by existing academics within the School of Physics and through the employment of casual lecturers from organisations such as ANSTO.

The School of Physics has particle and high energy physics research groups. These areas overlap with the field of nuclear science thereby providing other academic staff who will potentially be available.

- (b) Strengths of the department/school/faculty:

The establishment of the Master of Applied Nuclear Science degree and the Graduate Diploma in Applied Nuclear Science will compliment and strengthen the existing postgraduate coursework Master of Medical Physics degree and Graduate Diploma in Medical Physics through some common units of study. Further, with the introduction of the Master of Applied Nuclear Science and the Graduate Diploma in Applied Nuclear Science new and appropriate units of study will potentially be available for students enrolled in the Master of Medical Physics degree, the Graduate Diploma in Medical Physics, and other postgraduate coursework programs in the University.

1.3.3 Availability of teaching space, and other required facilities

- (a) Teaching rooms:

Teaching rooms in the School of Physics will be used. No additional teaching rooms are required.

- (b) Lecture theatres:

Lecture theatres in the School of Physics will be used. No additional lecture theatres are required.

- (c) Laboratories (including computer access labs):

Laboratories (including computer access labs) in the School of Physics will be used. No additional laboratories are required.

- (d) Staff offices:

Staff offices are already provided in the School of Physics for existing staff who will be involved. No additional staff offices are required.

- (e) Storage or other space required including any which needs to be rented externally:

Storage or other space as required will be in the School of Physics. No additional storage or other space is required.

1.3.4 Availability of Library Resources

Refer to letter of support from Library, which is attached.

1.3.5 Availability of IT and other Equipment

(a) Computer Technology:

Computers will be used in some practical sessions. Where simulations are involved the School's computational physics laboratory will be used. Otherwise computers will be used as components in other equipment (e.g. for control of equipment and collection and analysis of data)

(b) Other Equipment:

Some existing equipment in the School's undergraduate laboratories will be used for practical sessions. Students will also undertake laboratory work at ANSTO. It may also be necessary to purchase new equipment. Teaching grant schemes (internal and external) may be used to help in such purchases.

1.3.6 Timetabling arrangements

The proposed award course will be offered in the following teaching period:

Standard semester (1 & 2) and not during Summer and Winter Schools

APPROVALS

Nominated Faculty Officer

Dean of Faculty (or Delegate)

Resolutions of the Senate (Degrees, Diplomas and Certificates)

Template for Resolutions of the Senate

Resolutions of the Senate relating to degrees, diplomas and certificates

NOTE: Underline and strikethrough are to be used, **not** “track changes”.

Resolutions of the Senate

Degrees, diplomas and certificates in the Faculty of [Faculty]

The Resolutions of the Senate relating to degrees, diplomas and certificates in the Faculty of Science (pp358-359, *Calendar 2006*) are amended, with effect from 1 January 2008, as follows (additions indicated by underlined, deletions indicated by strikethrough):

The postgraduate degrees in the Faculty of Science are:

1. Degrees of Doctor

- 1.1 Doctor of Philosophy (PhD)
- 1.2 Doctor of Science (DSc)
- 1.3 Doctor of Clinical Psychology/Master of Science DCP/MSc
- 1.4 Doctor of Clinical Neuropsychology/Master of Science (DCN/MSc)

2. Degrees of Master

- 2.1 Master of Science (MSc)
- 2.2 Master of Science (Environmental Science) (MSc(EnvironSc))
- 2.3 Master of Environmental Science and Law (MEnvSciLaw)
- 2.4 Master of Medical Physics (MMedPhys)
- 2.5 Master of Science (Microscopy and Microanalysis) (MSc(Micro&An))
- 2.6 Master of Nutrition and Dietetics (MNutrDiet)
- 2.7 Master of Nutritional Science (MNutrSc) (Not available to new students in 2007)
- 2.8 Master of Psychology (MPsych)
- 2.9 Master of Information Technology (MInfTech)
- 2.10 Master of Information Technology Management (MInfTechMan)
- 2.11 Master of Bioethics (MBEth)
- 2.12 Master of Bioethics (Honours) (MBEthHon)
- 2.13 Master of Applied Information Technology (MApplIT)
- 2.14 Master of Applied Nuclear Science (MApplNucSci)**
- 2.15 Master of Applied Science (MApplSc), which shall also incorporate the streams:
 - 2.15.1 Master of Applied Science (Bioinformatics) (MApplSc(Bioinf))
 - 2.15.2 Master of Applied Science (Coastal Management) (MApplSc(CoastalMgt))
 - 2.15.3 Master of Applied Science (Environmental Science) (MApplSc(EnvSc))
 - 2.15.4 Master of Applied Science (Health Psychology) (MApplSc(HlthPsych))
 - 2.15.5 Master of Applied Science (Microscopy and Microanalysis) (MApplSc (Microsc & Micronal))
 - 2.15.6 Master of Applied Science (Molecular Biotechnology) (MApplSc(MBT))
 - 2.15.7 Master of Applied Science (Neuroscience) (MApplSc(NeuroSc))
 - 2.15.8 Master of Applied Science (Nutrition and Dietetics) (MApplSc(NutrDiet))
 - 2.15.9 Master of Applied Science (Psychology of Coaching) (MApplSc(PsychCoach))
 - 2.15.10 Master of Applied Science (Wildlife Health and Population Management) (MApplSc(Wild Hlth Pop Man))

3. Graduate Diplomas

The diplomas in the Faculty of Science shall be:

- 3.1 Graduate Diploma in Science (GradDipSc)
- 3.2 Graduate Diploma in Science (Psychology) (GradDipSc(Psych)) (Not available to new students in 2007)
- 3.3 Graduate Diploma in Psychology (GradDipPsych)
- 3.4 Graduate Diploma in Science (Microscopy and Microanalysis) (GradDipSc(Micr&An))
- 3.5 Graduate Diploma in Information Technology (GradDipIT)
- 3.6 Graduate Diploma in Information Technology Management (GradDipITMan)

- 3.7 Graduate Diploma in Applied Information Technology (GradDipAppIT)
- 3.8 Graduate Diploma in Medical Physics (GradDipMedPhys)
- 3.9 Graduate Diploma in Computing (GradDipComp)
- 3.10 Graduate Diploma in Bioethics (GradDipBEth)
- 3.11 Graduate Diploma in Geology and Geophysics (GradDipGeol&Geophys)
- 3.12 Graduate Diploma in Applied Nuclear Science (GradDipAppNucSci)**
- 3.13 Graduate Diploma in Applied Science (GradDipAppIsc), which shall also incorporate the streams:
 - 3.13.1 Graduate Diploma in Applied Science (Bioinformatics) (MApplSc(Bioinf))
 - 3.13.2 Graduate Diploma in Applied Science (Coastal Management) (MApplSc(CoastalMgt))
 - 3.13.3 Graduate Diploma in Applied Science (Environmental Science) (MApplSc(EnvSc))
 - 3.13.4 Graduate Diploma in Applied Science (Health Psychology) (MApplSc(HlthPsych))
 - 3.13.5 Graduate Diploma in Applied Science (Microscopy and Microanalysis) (MApplSc (Microsc & Micronal))
 - 3.13.6 Graduate Diploma in Applied Science (Molecular Biotechnology) (MAppSc(MBT))
 - 3.13.7 Graduate Diploma in Applied Science (Neuroscience) (MAppSc(NeuroSc)) (Not available to new students in 2007)
 - 3.13.8 Graduate Diploma in Applied Science (Nutrition and Dietetics) (MApplSc(NutrDiet) (Not available to new students in 2007)
 - 3.13.9 Graduate Diploma in Applied Science (Psychology of Coaching) (MApplSc(PsychCoach))
 - 3.13.10 Graduate Diploma in Applied Science (Wildlife Health and Population Management)

4. Graduate Certificates

The certificates in the Faculty of Science shall be:

- 4.1 Graduate Certificate in Science (History and Philosophy in Science) (GradCert(HPS))
- 4.2 Graduate Certificate in Science (Microscopy & Microanalysis) (GradCertSC(Micr&An))
- 4.3 Graduate Certificate in Information Technology (GradCertIT)
- 4.4 Graduate Certificate in Information Technology Management (GradCertITMan)
- 4.5 Graduate Certificate in Applied Information Technology (GradCertAppIT)

- 4.6 Graduate Certificate in Applied Science (GradCertAppIsc), which shall also incorporate the streams:
 - 4.6.1 Graduate Certificate in Applied Science (Bioinformatics) (MApplSc(Bioinf))
 - 4.6.2 Graduate Certificate in Applied Science (Coastal Management) (MApplSc(CoastalMgt))
 - 4.6.3 Graduate Certificate in Applied Science (Environmental Science) (MApplSc(EnvSc))
 - 4.6.4 Graduate Certificate in Applied Science (Health Psychology) (MApplSc(HlthPsych))
 - 4.6.5 Graduate Certificate in Applied Science (Microscopy and Microanalysis) (MApplSc (Microsc & Micronal))
 - 4.6.6 Graduate Certificate in Applied Science (Molecular Biotechnology) (MAppSc(MBT))
 - 4.6.7 Graduate Certificate in Applied Science (Neuroscience) (MAppSc(NeuroSc))
 - 4.6.8 Graduate Certificate in Applied Science (Nutrition and Dietetics) (MApplSc(NutrDiet))
 - 4.6.9 Graduate Certificate in Applied Science (Spatial Information Science) (GradCertAppIsc (SIS))
 - 4.6.10 Graduate Certificate in Applied Science (Psychology of Coaching) (MApplSc(PsychCoach))
 - 4.6.11 Graduate Certificate in Applied Science (Wildlife Health and Population Management)
- 4.7 Graduate Certificate in Bioethics (GradCertBEth), which shall also incorporate the streams:
 - 4.7.1 Graduate Certificate in Bioethics (Biotechnology) (GradCertBEthBTech)
 - 4.7.2 Graduate Certificate in Bioethics (Clinical Ethics) (GradCertBEthClinEth)

SECTION 1 – APPENDIX 3: RESOLUTIONS OF THE SENATE (COURSEWORK AWARD COURSES)

Resolutions of the Senate (Coursework award courses)

Template for Resolutions of the Senate

Template for Resolutions of the Senate relating to coursework award courses

Course Title: Graduate Diploma in Applied Nuclear Science and Master in Applied Nuclear Science

1. These Resolutions must be read in conjunction with the *University of Sydney (Coursework) Rule 2000*, which sets out the requirements for all coursework courses, and the relevant Faculty Resolutions.
2. **Requirements for the Graduate Diploma in Applied Nuclear Science**
 - 2.1 To qualify for the award of the Graduate Diploma in Applied Nuclear Science a student must:
 - 2.1.1 complete successfully units of study giving credit for a total of 48 credit points, selected from units of study approved for the Graduate Diploma in Applied Nuclear Science;
 - 2.1.2 satisfy the requirements of all other relevant By-Laws, Rules and Resolutions of the University.
3. **Requirements for the Master in Applied Nuclear Science**
 - 3.1 To qualify for the award of the Master in Applied Nuclear Science a student must:
 - 3.1.1 complete successfully units of study giving credit for a total of 72 credit points, selected from units of study approved for the Master in Applied Nuclear Science;
 - 3.1.2 satisfy the requirements of all other relevant By-Laws, Rules and Resolutions of the University.

SECTION 1 – APPENDIX 4: RESOLUTIONS OF THE FACULTY

Resolutions of the Faculty

Template for the Resolutions of the Faculty

Template for Faculty Resolutions relating to Coursework Courses

Course Title: Graduate Diploma in Applied Nuclear Science, Master of Applied Nuclear Science

These Resolutions must be read in conjunction with the University of Sydney (Coursework) Rule 2000 (as amended), which sets out the requirements for all coursework courses, and the relevant Resolutions of the Senate.

1. Admission

1.1 The Dean of the Faculty of Science may, on the recommendation of the Head of the School of Physics, admit to candidature for:

1.1.1 the Graduate Diploma in Applied Nuclear Science:

1.1.2 an applicant who is the holder of a bachelor's degree in Science or Engineering from the University of Sydney provided the applicant has achieved a major in physics, or equivalent;

1.1.3 a graduate of another university or appropriate institution who has equivalent qualifications to those specified in 1.1.2.

1.2 the Master of Applied Nuclear Science

1.2.1 a person who has the qualifications specified in subsection 1.1.2; or

1.2.2 a person who has completed requirements for the Graduate Diploma in Applied Nuclear Science.

1.3 Conditions of candidature are prescribed by Resolutions of the Faculty.

2. Units of study

2.1 The units of study for the Graduate Diploma in Applied Nuclear Science and Master in Applied Nuclear Science are listed in the table below.

2.2 Credit point value, assumed knowledge, corequisites, prerequisites and any special conditions are included in the description of units of study.

Unit Code	Unit Name	Credit Points	Semester
PHYS 5011	Nuclear Physics	6 cp	Semester 1
PHYS 5012	Radiation Physics & Dosimetry	6 cp	Semester 1
PHYS 5013	Nuclear Instrumentation	6 cp	Semester 1
PHYS 5014	Applications of Nuclear Physics	6 cp	Semester 1
PHYS 5015	Reactor Physics and Systems	6 cp	Semester 2
PHYS 5016	Nuclear chemistry & Nuclear Fuel cycle	6 cp	Semester 2
PHYS 5017	Energy Options and Environment	6 cp	Semester 2
PHYS 5018	Health Physics and Radiation Protection	6 cp	Semester 2
PHYS 5019	Research Methodology & Project (Not available for Graduate Diploma in Applied Nuclear Science)	24 cp	Semester 1, 2

3. Requirements for the Graduate Diploma and Master in Applied Nuclear Science

3.1 A candidate for the Graduate Diploma in Applied Nuclear Science shall complete coursework to the value of 48 credit points comprising all units of study designated for this program as detailed in the table above, excluding the project PHYS5019.

3.2 A candidate for the Master in Applied Nuclear Science shall complete coursework to the value of 72 credit points comprising all units of study designated for this program as detailed in the table above, including the project PHYS5019.

4. Details of units of study

4.1 The units of study for the Graduate Diploma and Master in Nuclear Science are listed in the table in sub-section 2 above. The units of study may be varied by the Faculty from time to time.

4.2 A candidate for the course shall proceed by completing units of study as prescribed by the Faculty.

4.3 A unit of study shall consist of such lectures, seminars, tutorial instruction, essays, exercises, practical work, or project work as may be prescribed.

4.4 In these resolutions, 'to complete a unit of study' or any derivative expression means:

4.4.1 to attend the lectures and the meetings, if any, for seminars or tutorial instruction;

4.4.2 to complete satisfactorily the essays, exercises, practical and project work if any; and

4.4.3 to pass any other examination of the unit of study that may apply.

4.5 All units of study for a particular subject area may not be available every semester.

5. Enrolment in more/less than minimum load

5.1 A candidate may proceed on a full-time or part-time basis.

6. Cross-institutional study

6.1 Cross-institutional study shall not be available to students enrolled in the Graduate Diploma and Master in Applied Nuclear Science except where the University of Sydney has a formal Cooperation Agreement with another University.

7. Restrictions on enrolment

7.1 Admission to the Graduate Diploma in Applied Nuclear Science and Master of Applied Nuclear Science may be limited by a quota.

7.2 In determining the quota, the University will take into account:

7.2.1 availability of resources including space, laboratory and computing facilities; and

7.2.2 availability of adequate and appropriate supervision.

7.3 In considering an application for admission to candidature the Dean shall take account of the quota and will select, in preference, applicants who are most meritorious in terms of subsection 1 above.

8. Discontinuation of enrolment

8.1 A student who does not enrol in any semester without first obtaining written permission from the Dean to suspend candidature will be deemed to have discontinued enrolment in the course.

8.2 Students who have discontinued from the course will be required to apply for admission to the course and be subject to admission requirements pertaining at that time.

9. Suspension of candidature

9.1 A student may seek written permission from the Dean to suspend candidature in the course.

9.2 Suspension may be granted for a maximum of one year.

10. Re-enrolment after an absence

10.1 A student who plans to re-enrol after a period of suspension must advise the Faculty of Science Office in writing of their intention by no later than the end of October for First Semester of the following year or the end of May for Second Semester of the same year.

11. Satisfactory progress

11.1 Candidates for the Graduate Diploma in Applied Nuclear Science and the Master of Applied Nuclear Science shall be governed by the rules as follows:

11.1.1 A student who has failed a cumulative total of 12cp at any stage of enrolment in the Master of Applied Nuclear Science will be required to show good cause why he or she should be allowed to re-enrol and, if good cause has not been established, the student's enrolment will be transferred to the Graduate Diploma in Applied Nuclear Science;

11.1.2 A student who has failed a cumulative total of 18cp at any stage of enrolment in the Master of Applied Nuclear Science and/or the Graduate Diploma in Applied Nuclear Science will be required to show good cause why he or she should be allowed to re-enrol and, if good cause has not been established, the student will not be permitted to re-enrol.

11.1.3 A student who has failed a unit at the second attempt in the Master of Applied Nuclear Science and/or Graduate Diploma in Applied Nuclear Science will be deemed to have failed to complete course requirements and will be required to show good cause why he or she should be allowed to re-enrol. If good cause has not been established, the student will not be permitted to re-enrol.

12. Time limit

12.1 A candidate for the Graduate Diploma in Applied Nuclear Science shall complete the requirements for the award in a minimum of two semesters and a maximum of 6 semesters, and (in the event of suspension) except with permission of the Dean within five calendar years of admission to candidature.

12.2 A candidate for the Master in Applied Nuclear Science shall complete the requirements for the award in a minimum of 3 semesters and a maximum of 6 semesters, and (in the event of suspension) except with permission of the Dean within five calendar years of admission to candidature.

13. Assessment policy

13.1 A candidate may be tested by written and oral examinations, assignments, exercises and practical work or any combination of these.

13.2 On completion of the requirements for the Graduate Diploma in Applied Nuclear Science or the Master in Applied Nuclear Science, the results of the examination of the coursework shall be reported by the School of Physics to the Faculty, which shall determine the result of the candidature.

14. Credit transfer policy

14.1 Credit is not available in the Graduate Diploma in Applied Nuclear Science and the Master of Applied Nuclear Science for postgraduate study which has not been undertaken in these award courses within the previous three years.

14.2 A candidate who has qualified for the award of the Graduate Diploma in Applied Nuclear Science may transfer, within three years, to the Master of Applied Nuclear Science and receive credit for up to 48 credit points from the Graduate Diploma in Applied Nuclear Science.

SECTION 1 – APPENDIX 5: LIBRARY IMPACT STATEMENT

(Please see attached)

I have examined the Library needs related to the proposal and certify that existing Library holdings, staffing, services and accommodation are, or will be, **adequate/ inadequate** to cover the demands that are inherent in it.

(If there are any concerns about library holdings, please address these.)

.....
for the University Librarian

.....
Date

Further comments:

Holdings:

Services/Staffing:

SECTION 2: FEE REVIEW AND FEE SETTING

Faculty: Science
Department/School presenting the proposal: Physics
Faculty Contact person and/or: Kim Schwieters **Ext. No:** 12203
Academic Proponent: Dr Clive Baldock
E-mail: c.baldock@physics.usyd.edu.au

2.1.1 Type of proposal: **New**
Amended **Please note if the proposal is changing the course name, for example Bachelor of ABC to Bachelor of AB (C) then this is a NEW course.**
Deletion

2.1.2 Type of course: Undergraduate
 Postgraduate Coursework
 Postgraduate Research

2.1.3 Name of Award course(s)
 Name of **New** Award course: OR
 Master of Applied Nuclear Science
 Graduate Diploma in Applied Nuclear Science

2.1.4 Abbreviated name
 MAppNucSci.
 GradDipAppNucSci

2.1.5 Date of introduction or deletion
 Introduced: Year 2008 Semester 1
 Deletion: Year Semester

2.1.6 Fee review and Fee-setting

(b) **Fees for Postgraduate award course:**

Postgraduate award course	Current Fees (per 1 EFTSU per annum)		Proposed Increase (%)		Proposed Fees (per 1 EFTSU per annum)	
	Local students	International students	Local	Int'l	Local students	International students
GradDipAppNucSci	15360	24240	5.6	5.6	16320	25680
MasterAppNucSci	15360	24240	5.6	5.6	16320	25680

PROPOSED BY:

Nominated Faculty Officer Dean of Faculty (or Delegate) PVC (College)

APPROVAL:

Deputy Vice-Chancellor (Academic & International) / Vice-Chancellor

SECTION 3: COURSE INFORMATION FORM AND MARKETING PLAN

PART 1: COURSE INFORMATION FOR FLEXSIS

Faculty: Science

Department/School presenting the proposal: Physics

Faculty Contact person and/or: Kim Schwieters

Ext. No: 12203

Academic Proponent: Dr Clive Baldock

E-mail: c.baldock@physics.usyd.edu.au

3.1.1 Type of proposal: **New** **Amended** **Deletion** Please note if the proposal is changing the course name, for example Bachelor of ABC to Bachelor of AB (C) then this is a NEW course.

3.1.2 Type of course: Undergraduate
Postgraduate Coursework
Postgraduate Research

3.1.3 Name of Award course(s)
Name of **New** Award course: OR
Master of Applied Nuclear Science
Graduate Diploma in Applied Nuclear Science

3.1.4 Abbreviated name
MAppNucSci.
GradDipApplNucSci

2.1.5 Date of introduction or deletion
Introduced: Year 2008 Semester 1
Deletion: Year Semester

3.1.6 Course Code - TBA
Course Code of Existing Award Course for amendment or deletion:

3.1.7 CRICOS Code - TBA
CRICOS Code of Existing Award Course for amendment or deletion:

3.1.8 Short degree description (e.g. for the UAC Guide): Not applicable

3.1.9 Full degree description (e.g. for Faculty handbook):

The Master of Applied Nuclear Science and Graduate Diploma in Applied Nuclear Science are designed to meet the growing needs both within Australia and globally for individuals with a postgraduate education and training in the nuclear sciences. They build upon the Physics major and provide a level and type of specialisation that is not available at the undergraduate level.

3.1.10 Level of Award:

- Higher Doctorate
- Doctor of philosophy (PhD)
- Doctorate by research and advanced coursework
- Masters degree by research
- Masters degree by coursework
- Graduate Diploma
- Graduate Certificate
- Bachelor's degree
- Advanced Diploma
- Associate Diploma
- Diploma
- Certificate

3.1.11 Is this an Honours course? Yes No
Honours requirements (if applicable):

3.1.12 If the proposal is for a new award course, please indicate if the new course is the result of new resolutions for an existing course? Yes No

3.1.13 Name of award that will be conferred upon completion of course:

Master of Applied Nuclear Science
Graduate Diploma in Applied Nuclear Science

3.1.14 If the proposal is for a new award course, please indicate which category the proposed course should be allocated to according to the DEST Field of Education and Discipline Area (available from the Courses and Fees Toolkit on the Academic and International website):

DEST Field of Education 019999
DEST Discipline Area: Natural and Physical Sciences not elsewhere classified

3.1.15 Credit points required for the Award:

Master of Applied Nuclear Science 72 cp
Graduate Diploma in Applied Nuclear Science 48 cp

3.1.16 Location/ Campus for Student Attendance:

Camperdown & Darlington	<input checked="" type="checkbox"/>	Camden	<input type="checkbox"/>	Cumberland	<input type="checkbox"/>
Mallett Street	<input type="checkbox"/>	St James	<input type="checkbox"/>	College of the Arts	<input type="checkbox"/>
Conservatorium	<input type="checkbox"/>	Offshore	<input type="checkbox"/>	please specify	<input type="checkbox"/>
Hospital (please specify)	<input type="checkbox"/>				<input type="checkbox"/>

3.1.17 Are students enrolling in the proposed award course subject to:

Criminal Record Check Yes No
 Prohibited Employment Declaration Yes No
 Health Records & Privacy Yes No
 Information Declaration

3.1.18 Prohibitions:**3.1.19 Articulation Pathway** (if applicable): **Not applicable**

Graduate Diploma in Applied Nuclear Science to Master in Applied Nuclear Science

3.1.20 Units of Study offered in proposed award course:

Table of Units for Applied Nuclear Science Courses (MAppNucSci & GradDipAppNucSci)			
PHYS 5011	Nuclear Physics	6 cp	Semester 1
PHYS 5012	Radiation Physics & Dosimetry	6 cp	Semester 1
PHYS 5013	Nuclear Instrumentation	6 cp	Semester 1
PHYS 5014	Applications of Nuclear Physics	6 cp	Semester 1
PHYS 5015	Reactor Physics and Systems	6 cp	Semester 2
PHYS 5016	Nuclear chemistry & Nuclear Fuel cycle	6 cp	Semester 2
PHYS 5017	Energy Options and Environment	6 cp	Semester 2
PHYS 5018	Health Physics and Radiation Protection	6 cp	Semester 2
PHYS 5019	Research Methodology & Project (Not available for Graduate Diploma in Applied Nuclear Science)	24 cp	Semester 1, 2

SECTION 3 : COURSE INFORMATION FORM AND MARKETING PLAN

PART 2: COURSE INFORMATION FOR UNIVERSITY'S UNDERGRADUATE AND POSTGRADUATE COURSE DATABASE (FOR MARKETING PURPOSES)

3.2.1 UAC Code: [redacted] (Undergraduate courses only)

3.2.2 CRICOS Code: TBC

3.2.3 Career Opportunities: in nuclear science related fields.

3.2.4 Areas of study: Nuclear Science

3.2.5 Assumed Knowledge: [redacted]

3.2.6 Minimum education requirements:

Year 12 (senior secondary certificate) or equivalent	<input type="checkbox"/>	Bachelor degree (pass)	<input checked="" type="checkbox"/>
No minimum education	<input type="checkbox"/>	Bachelor (hons)	<input type="checkbox"/>
Mature background	<input type="checkbox"/>	Graduate certificate	<input type="checkbox"/>
Relevant employment experience	<input type="checkbox"/>	Graduate diploma	<input type="checkbox"/>
		Master degree	<input type="checkbox"/>

Additional information: [redacted]

3.2.7 If the proposal is for a Postgraduate award course, please indicate the course method:

Coursework Coursework with research pathway
Research

3.2.8 UAI (for UG only): 2xxx (e.g. 2007) [redacted]
2xxx (e.g. 2006) [redacted]
2xxx (e.g. 2005) [redacted]
2xxx (e.g. 2004) [redacted]

3.2.9 Additional admission selection criteria: [redacted]

3.2.10 If the course is offered to international students please complete the following:

UAI International (for international students only): [redacted] (Undergraduate courses only)

Other international student entry requirements: [redacted]

3.2.11 If the proposal is for a Postgraduate award course, please indicate the application closing date:

For local students, closing date for applications is 30 November

For international students, closing date for applications is 31 October

3.2.12 Will mid-semester intake be available for:

Commonwealth Supported students	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not applicable
Local fee-paying students	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
International fee-paying students	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	

SECTION 3 : COURSE INFORMATION FORM AND MARKETING PLAN

PART 3: MARKETING PLAN

3.3.1 Marketing plan and strategy

The proposed award course will be included in the 2008 Faculty of Science Postgraduate coursework brochure, and marketed through the university's Postgraduate Studies Week in September/October 2007, and at Postgraduate studies roadshows.

The proposed award course will also be included in the International Office publications and website.

APPROVALS

Nominated Faculty Officer

Dean of Faculty (or Delegate)

SECTION 4: INTERNATIONAL STUDENT ADMINISTRATION REQUIREMENTS

Faculty: Science

Department/School presenting the proposal: Physics

Faculty Contact person and/or: Kim Schwieters

Ext. No: 12203

Academic Proponent: Dr Clive Baldock

E-mail: c.baldock@physics.usyd.edu.au

4.1.1 Type of proposal: New
Amended Please note if the proposal is changing the
course name, for example Bachelor of ABC to
Bachelor of AB (C) then this is a NEW course.
Deletion

4.1.2 Type of course: Undergraduate
Postgraduate Coursework
Postgraduate Research

4.1.3 Name of Award course(s)
Name of **New** Award course:
Master of Applied Nuclear Science
Graduate Diploma in Applied Nuclear Science

4.1.4 Abbreviated name:
MAppNucSci.
GradDipApplNucSci

4.1.5 Date of introduction or deletion
Introduced: Year 2008 Semester 1
Deletion: Year Semester

4.1.6 Course Code
Course Code of Existing Award Course for amendment or deletion: Not applicable

4.1.7 CRICOS Code
CRICOS Code of Existing Award Course for amendment or deletion: Not applicable

4.1.8 Marketing plan and strategy

The proposed award course will be included in the 2008 Faculty of Science Postgraduate coursework brochure, and marketed through the university's Postgraduate Studies Week in September/October 2007, and at Postgraduate studies student recruitment markets. The proposed award course will also be included in the International Office publications and website.

4.1.9 Availability of Course

Will international students be able to enrol full-time?

Yes No

4.1.10 Mode of Study

Will international students be able to study the proposed course in "face-to-face" mode for at least 75% of the time each semester?

Yes No

4.1.11 Incidental (Ancillary) Fees

Will the proposed course incur any compulsory costs other than tuition fees and compulsory subscriptions?

Yes
No

4.1.10 Commencement Semester

Indicate whether entry to the course is possible in each semester.

SEM1 ONLY SEM1or 2 SEM2 ONLY

If entry is permissible in Semester 2, please indicate whether subject choice will be restricted and whether the duration of the course will necessarily increase?

4.1.11 English Language Requirements

Will the minimum English language requirement for the proposed course differ from the usual requirements (i.e. overall IELTS score of 6.5 with a minimum of 6.0 in each band)?

Yes If yes please indicate IELTS equivalent
No

APPROVALS

.....

Dean or delegate

The Proposed Course is suitable for CRICOS registration and International Office processing.

.....
Director International Office

SECTION 4 – APPENDIX 1: CONSULTATION CHECKLIST FOR INTERNATIONAL STUDENT ADMINISTRATION REQUIREMENTS

Internal / External Stakeholder	Contact person	Issue / Topic
Academics and other staff from own Faculty	A/P Deidre Dragovich, Associate Dean (Postgraduate Coursework), Faculty of Science	Other course <ul style="list-style-type: none"> Information on how other courses are developed and marketed to overseas students
International Office	Deputy Director, Government Relations and Student Advice	Legislative Compliance <ul style="list-style-type: none"> Legislative compliance for offering courses to international students e.g. requirements relating to mode of delivery/study Arrange CRICOS registration
International Office	Interim Deputy Director Marketing and Admissions	International market and admissions <ul style="list-style-type: none"> Sensitivities in the international student market English Language Requirements
Faculty Marketing officer OR College Marketing officer	Kate Walker Faculty Marketing Manager	Market research, Marketing <ul style="list-style-type: none"> Conducting market research and analysis Marketing plans and strategy Primary or Secondary sources of comparative data

5.1.8 Estimated Student Enrolments (i.e. Head Count)

Estimated student numbers for the next three years of the award course:

Estimated Student Enrolments		2008	2009	2010
Local fee-paying		6	10	10
International fee-paying		3	5	5
Total Student Enrolments		9	15	15

5.1.9 For undergraduate degrees only, please indicate the expected 'carry-on' rate from one academic year to the next. Not applicable

5.1.10 IMPORTANT The University operates within a fixed target for Commonwealth Supported load. Any new course proposals which include intakes of Commonwealth Supported (HECS) students must be accompanied by an indication of a corresponding reduction in the HECS intake to another degree of similar duration offered within the same Faculty.

Details of proposed reduction: Not applicable

APPROVALS

Nominated Faculty Officer

Dean of Faculty or delegate

CHECKLIST FOR SECTIONS 1 - 5

This Checklist has been developed as a guide to ensure the University supplies all necessary information to DEST. Nominated Faculty Officers will need to use the checklist to verify that all sections have been completed prior to sending the proposal to the relevant areas specified in the Instruction Sheet.

Section 1 – Academic Board Course Proposal

For proposed New/Amended course have the following been completed:

- Part 1 – Overview of Proposal
- Part 2 – Details for Assessment of Proposal
- Part 3 – Resource Implications
- Appendix 2,3,4,5

For proposed Deleted course have the following been completed:

- Part 1 – Overview of Proposal
- Part 2 – Details for Assessment of Proposal (items 1.2.1, 1.2.2, 1.2.9, 1.2.11 ONLY).....
- Appendix 2,3,4

Has the Course Proposal been signed off by the Dean and Faculty Manager

Section 2 – Fee Review and Fee-Setting

Has this section been completed for New/Amended course

Has this section been signed off by the PVC (College), Dean and Faculty Manager

Section 3 – Course Information Form and Marketing Plan

For proposed New/Amended course have the following been completed:

- Part 1 – Course Information for FlexSIS
- Part 2 – Course Information for University’s Course Database
- Part 3 – Marketing Plan

Have the Student Centre and Marketing & Student Recruitment Unit been consulted about the Deleted course

Has this section been signed off by the Dean and Faculty Manager

Section 4 – International Student Administration Requirements

Has the section been completed for proposed New/Amended course

Has the International Office been consulted about the Deleted course

Has this section been signed off by the Dean/nominee and Director, International Office

Section 5 – Planning Support Office

Has the section been completed for proposed New/Amended course

Has the Planning Support Office been consulted about the Deleted course

Has this section been signed off by the Dean and Faculty Manager

29/11/2006

A/Prof Brian James
Head
School of Physics, A28
University of Sydney
NSW 2006
Australia

Re: Master of Applied Nuclear Science program at the University of Sydney

Dear Brian,

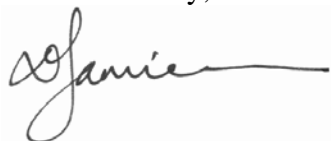
The proposed Master of Applied Nuclear Science program at the University of Sydney is an excellent response to the need to train an increased cadre of nuclear scientists should the Federal Government support the use of Nuclear Power or other parts of the Nuclear Fuel Cycle in Australia.

The lack of skills in nuclear science and technology has been clearly identified by the current Uranium Mining, Processing and Nuclear Energy Review commissioned by the Prime Minister. Further, both that Review and the recent report of the Uranium Industry Framework identified a skills shortage of Radiation Protection staff in Australia and the graduates of the proposed Master program will have the academic background to assist in filling this skill gap in Australian Industry.

While the Australian Institute of Physics does not have a advocacy position regarding Nuclear Power, it does support the need to introduce Physics based programs to fill the existing and likely future skills gaps in Nuclear Science.

I wish the University of Sydney all the best in implementing this innovative program.

Yours sincerely,



Prof David N. Jamieson, President AIP.



The University of Sydney
School of Chemistry F11
NSW 2006 Australia

phone: 61-2-9351 2742
facsimile: 61-2-9351 3329
email: kennedyb@chem.usyd.edu.au

School of Chemistry

A/Professor Brian James
School of Physics

November 2 2006

Dear Brian

Master of Applied Nuclear Science proposal

The proposal for a Master of Applied Nuclear Science has been discussed by a number of parties in Chemistry. It is our view that such a course is timely, and we support your proposal. Given the overlap of some of the proposed modules with the research and teaching interests in Chemistry and our strong links with ANSTO we would be keen to contribute to this course, especially in the areas of Nuclear Chemistry, Applications of Radioisotopes and in selected experimental areas, especially neutron scattering.

Yours sincerely

Dr Brendan J. Kennedy
Post-Graduate Coordinator



The University of Sydney

School of Medical Radiation Sciences

Faculty of Health Sciences

P.O. Box 170

Lidcombe NSW 1825

Australia

Steven Meikle, Ph.D.

Associate Professor

Head of School

Telephone +61 2 9351 9519

Facsimile +61 2 9351 9146

email smeikle@fhs.usyd.edu.au

6 November 2006

A/Prof Brian James
Head, School of Physics
University of Sydney
NSW 2006
Australia

Dear Brian,

I am fully supportive of the proposal for a coursework Master of Applied Nuclear Physics degree in the School of Physics. This fits in well with other initiatives in the university based on the nuclear sciences, including our efforts in nuclear medicine and radiochemistry in the School of Medical Radiation Sciences and at the Brain and Mind Research Institute. Please let me know if you require any further information or assistance with this.

Sincerely,

A/Prof Steven Meikle

Head of School, Medical Radiation Sciences



University of Sydney

LIBRARY IMPACT STATEMENT

Proposed Award Course: Postgraduate coursework degree:

Master of Applied Nuclear Science (MAppNucSci)

Graduate Diploma in Applied Nuclear Science (GradDipAppNucSci)

I have examined the Library needs related to the proposal and certify that existing Library holdings, staffing, services and accommodation are, or will be, adequate to cover the demands that are inherent in it.

Students will use resources and services via several of the University of Sydney Libraries including Madsen, Engineering, Medical, Health Sciences and Fisher Libraries.

To ensure that sufficient resources are available it will be necessary for the Faculty to work closely with the Library to develop the collection. It is noted that 4 of the 9 Units of Study will be common with the Masters of Medical Physics program. Some of the materials required for the proposed course are not held in the Madsen Library and subject areas are not well provided for within the current collections of the other University Libraries. To ensure adequate access to material it is estimated that about \$2500.00 will be required from Library seed funding for purchasing items to support this new course.

We look forward to working in partnership with the staff and students to support this course and develop training and services appropriate to their needs.

If, in the future, new Units of Study are developed within this program, or the Faculty intends delivering the program or Units within the program in a different mode, it is understood that the Library will be advised and will be asked to provide additional Library Impact Statements specific to the new Units.

A handwritten signature in cursive script, reading 'Susan Hanfling', written over a dotted line.

Susan Hanfling
Director, Sciences and Technology Libraries
for the University Librarian

27 November 2006