PROPOSAL TO INTRODUCE A NEW COURSE
(formerly known as subject)

FOLLOWING COMPLETION OF THE PROPOSAL, PLEASE DELETE ALL THESE YELLOW HIGHLIGHTED INSTRUCTIONS.

The original signed document (paper copy) and an electronic version must be received by the Secretariat at least ten days prior to the meeting date of the Faculty Standing Committee.

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Staff intending to use digitised information to support their programs must consult with the University Librarian, Mr Andrew Wells on 9385-2662 (before this proposal is signed off by the University Librarian).

For assistance in completing the Form in the first instance contact:

Your Registrar’s Nominee OR members of the Secretariat team:

Lynda Ho ext 2792 or email l.ho@unsw.edu.auMedicine and Arts & Social Sciences.
Peter King ext 3073 or email p.king@unsw.edu.auScience, Commerce & Economics and Engineering
Sandra Basir ext 3289 or email s.basir@unsw.edu.auAustralian Graduate School of Management, Built Environment, College of Fine Arts and Law

If further assistance is required, contact:
Jane Gatwood, Assistant Registrar, Student Office, ext 3099 or email j.gatwood@unsw.edu.au
Kathy Keane, Assistant Registrar, Student Progression & Graduation, ext 3154 or email k.keane@unsw.edu.au
Mr Richard Sanchez, ext.3362 or email richard.sanchez@unsw.edu.au.

1. COURSE DETAILS

1.1 Course ID COMP3431

1.2 Course name - Long
An Introduction to Intelligent Agent Architectures

1.3 Course name - Abbreviated
Intro. Intelligent Agents

1.4 Course Authority: Dr William Uther  ext/email: x56926/willu@cse.unsw.edu.au

1.5 Organisational Unit responsible for course

School: School of Computer Science and Engineering  Faculty: Engineering

Academic Group Code (Faculty): ENG
Academic Organisation Code (Owner): COMPSC

1.6 Justification of Proposal
This course aims to improve two aspects of the UNSW course offering:
- Students reaching Honours/PhD are under-prepared in intelligent agent action planning systems. It should also make the current 4th year experimental robotics course more useful for the students by giving them more theoretical background before the practical course.
- Specifically it will prepare students for research (Hons and PhD) using structured architectures on at least one real agent system (e.g the rUNSWiiT AIBO system).

1.7 Consultation Process
The LiC’s of two related CSE courses, COMP3411, Artificial Intelligence, and COMP4416, Intelligent Agents, have been consulted. They are both happy with this proposed course.
1.8 Units of credit (UOC) Session/s offered | Hours Per Week
---|---
6UoC | S2 | 4 hours lecture, 2 hours lab

1.9 Pre-requisites: COMP2011 or COMP2711
Co-requisites:
Exclusions:

1.10 Proposed Entry in the Faculty Handbook

UC 6 HPW 6
Pre-requisites: COMP2011 or COMP2711

Note/s: Quota: 16. Please email course convenor for enrolment requests.

An introduction to Intelligent agent design. Picking actions using planning, learning or engineered control. Both practical and theoretical components. Practical component: Re-implement parts of a real agent architecture on a robot. Assignment based. Emphasis on engineering a working system. Theoretical component: Introduction to a variety of research agent architectures including classical planning and reinforcement learning. Lecture and lab based.

1.11 Is this course replacing an existing course?
No

1.12 Undergraduate / Postgraduate / Other
Elective

1.14 Program stage

Offered in second semester because of the availability of the robots. Because of the pre-requisites, it would not normally be available before 3rd year. First offered S2 2004.

1.15 Program/s in which course is be available

3645 - Computer Engineering
3647 - Bioinformatics
3648 - Software Engineering
3978 - Computer Science

and all combined and fast-track programs including one of those

5452 - GradDip in CS
5453 - GradDip InfoScience
8508 - MInfoSc
8680 - MCompSc
8685 - MEngSc
1650 - PhD in CSE
2665 - ME by research in CSE
2765 - MSc by research in CSE

1.16 Proposed teaching methods and assessment practices

Lab attendance, Assignments, and a formal exam.

The lab attendance is a small mark to make people turn up to the labs - they're important. The assignments track the practical component of the course. The formal exam tracks the theoretical component of the course.

1.17 Assessment grades to be used
full range of grades

1.18 Mode of delivery
Internal

1.18.1 Multi-mode Delivery Guidelines
1.19 **Information Technology Requirements for students**

Standard resources available in school.

1.20 **Textbooks**

No Required Texts.

Recommended Reading:
- Russell and Norvig; Artificial Intelligence, a modern approach (2nd Ed), Prentice Hall, 2003
- Ghallab, Nau and Traverso; Automated Planning: theory and practice, Morgan Kaufmann, 2004
- Sutton and Barto; Reinforcement Learning, an introduction, MIT Press, 1998

1.21 **Industrial experience component**

None

2. **RESOURCE STATEMENT**

2.1 **Enrolments**

Estimated or proposed enrolments for the next three years.

The practical component of this course requires access to robots. That limits enrolment to 16 people per course.

2004: 16

2005: 16

2006: 16

2.2 **Resource Requirements**

Note: This course will be taught by a NICTA employee, and hence few staff resources need to be supplied by the school.

This course will use the Sony AIBO robots owned by CSE (and used for RoboCup in S1).

**Staffing Requirements:**

Hours per week

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<tr>
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<th>Full-time Academic Staff</th>
<th>Part-time Teaching Staff</th>
<th>General Staff</th>
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<td>(NICTA) 6</td>
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**Field Costs:** N/A

**Studio/Laboratory Requirements:** 2 hours p/w in a cluster - able to teach

**Materials Requirements:** Access to CSE Sony AIBO robots (only available S2)

**Equipment Costs:** N/A

**Computing Requirements:** Standard for CSE courses; already available.

**Library Requirements:** Standard for CSE courses; already available.

**Capital Funds Requirements:** None

2.3 **Servicing Implications:**

Not Applicable
2.4 Teaching Arrangements:

(i) Will other units contribute on a regular basis to the teaching of this course? 
YES
(ii) If so, which units are involved and what proportion of the course will they teach?

NICTA will provide 100% of the Academic Staff for this course.

Please see the attached letter guaranteeing the staff.

Alternative Delivery Arrangements:

Not Applicable

2.6 Details of Tuition Fees:

Proposed fee: Standard for an engineering course of this type.
3. AUTHORISATION

3.1 University Librarian’s Endorsement

*Note: this section of the Proposal must be signed by a Library representative, stating:*

I have examined the Library needs related to the above proposal and certify that existing Library holdings, staffing, services and accommodation are adequate / inadequate (delete one) to cover the demands that are inherent in it.

Appropriate arrangements for the use of digitised material to support this course have been made by the Course Authority with the University Librarian.

Further Comments:

University Librarian  
/ /2003

3.2 Head of School’s Approval

*Note: this section of the Proposal must be signed by the Head of School, stating:*

I have examined the resource implications of the above proposal in regard to staff, space, materials, equipment, capital funds, and computing, and certify that the School can cover the demands that are inherent in it.

Further Comments:

Head of School  
/ /2003

3.3 Dean’s Approval

*Note: this section of the Proposal must be signed by the Dean, stating:*

I have examined the resource implications of the above proposal in regard to staff, space, materials, equipment, capital funds, and computing, and certify that:

*(Tick whichever is applicable)*

3.3.1 (i) the proposal involves no additional resources. (A statement from the Head of School explaining how this can be achieved must be provided); or

(ii) the proposal involves additional resources and it is proposed to redeploy existing resources within the faculty. (A statement from the Head of School explaining how this will be achieved must be provided); or

(iii) the proposal involves additional resources to be obtained as set out below; or

(iv) the additional resources essential to bring the proposal into effect cannot be found within resources available to the faculty.

3.3.2 Fees (delete if not applicable):
• a fee will not be charged for this program (other than HECS)
• a fee will be charged for this program for local fee-paying students
• a fee will be charged for international students

If a fee is to be charged the Dean certifies as follows:

I have ensured that the Vice-Chancellor has been advised of the proposed fee arrangements, and note that approval of fee arrangements is needed before the new program can be implemented.

3.3.3 the proposal conforms to the University's commitment to Equal Opportunity in Education.

Statement from Head of School on Source of Additional Resources and/or Further Comments:

Dean

/ /2003