**Statement to Faculty Senate**

**John Warnock, Professor and Director of the Graduate Program in Rhetoric, Composition, and the Teaching of English, Department of English**

**February 6, 2006**

My name is John Warnock. I am a Professor in the English Department, a past Faculty Senator, and currently director of the graduate program in Rhetoric, Composition, and the Teaching of English in the Department of English. I'm here today to alert the Senate to a threat to one aspect of the excellence of our university, and to ask for support.

[The minutes issue: This will take about 7 minutes...etc.]

I came to this University in 1991 and it was immediately apparent to me that the faculty across this university and its administration had an unusual commitment to writing. It was not just that the faculty had agreed that the ONE course EVERY undergraduate at the UA would take was first-year composition. More important than that, the faculty had recognized that writing was NOT just a basic competency that can be learned in a first-year course, that instead it is something that has to be supported across the curriculum and throughout the years of undergraduate study if students are to develop as effective writers.

The primary sponsorship of teaching and learning writing was and still is to be found, as is usually the case, in the Department of English, specifically in the Writing Program and in the graduate program in Rhetoric, Composition, and the Teaching of English, whose faculty act as stewards of the Writing Program.

The graduate program in RCTE is one of the top five in the country, and the Writing Program is also one of the best in the country, a claim I will not pause to argue here but would be glad to demonstrate elsewhere. When we add to RCTE and the Writing Program the other graduate programs in English--English Language and Linguistics, Literature, and Creative Writing, which is also top five—the English Department itself is,

in my opinion, one of the best in the country. This departmental ranking does not show up in, for example, the survey *US News and World Report*. I've seen that survey and it is concerned only with "English" as the narrow kind of literary study sponsored in some elite institutions. Here the faculty in English Department have a much richer idea of what "English" entails, an idea that has been embodied in its new undergraduate curriculum, a curriculum which is proving to be popular with undergraduates: every one of the major's core courses is over-enrolled this semester.

But I'm not here to tout the English Department. I mention what I have so far only to identify for you a source of excellence in this university, one that in my view has not made it onto the screen in the current discourse.

And why should this be a matter of concern to those outside of English?

Because of the urgent threat that has arisen to the longstanding commitment of the faculty of this university to writing.

This threat is currently appearing in our university three ways.

First, as you may have read in the *Wildcat*, the Writing Center is threatened. This Writing Center, now located centrally in Bear Down gym, was founded in 1991, with help from the Dean of the College of Humanities and the Soldwedel family, but it has always been supported primarily by the English Department with funds from its temporary instructional budget. The Center has been managed by the Writing Program, and its services, which are increasingly in demand, have been available to the entire university.

This Writing Center will have to suspend operations--this summer--unless it receives funding from the University. University funding would have made sense from the beginning, given the Writing Center's university-wide mission.

The second way writing is threatened is by the erosion of support in the Writing Program for the training, support, and supervision of the graduate students who teach the composition courses. The Writing Program now serves every undergraduate student in the entering class—over 11,000 students a year--with graduate student instructors whose record of excellent teaching is, in my opinion, breathtaking. This record has been achieved not only by virtue of their native ability (we do, at the moment, attract very good graduate students to this English Department), but by the excellent training and support they get in the Writing Program.

In the last few years, the Writing Program has lost 4 full-time positions, none of which it has been allowed to replace. Starting now, unless the problems this has created are addressed, our graduate student teachers will not get crucial support, and the consequences for the teaching and learning of writing in our university will not be long in appearing.

Those of you who have taught at universities where writing is supported in the manner that is the norm know what kinds of consequences I'm talking about. Those of you who have taught at the University of Arizona for the last 15 years may not know this. Unless you have taught students who have taken their composition courses elsewhere.

And then there's retention. Every one of the recent candidates to replace our president recognized our need to improve retention. The composition classes are the university's front porch. Without an excellent writing program of the sort we now have, any other efforts at retention will be seriously undermined.

The third way writing is threatened arises from threats to funding for the GATs. It has happened this way. Last Fall, the Provost authorized the English Department to hire a faculty member in RCTE, a hire authorized as being "of strategic importance." The English Department was later told, however, that the funds for this hire could come from any of the several departmental lines that have been swept in the last few years, including one held by a faculty member in RCTE and long-time director of the Writing Program

who retired two years ago. Instead these funds would have to come from its temporary instructional budget. Except for the Writing Center, this budget goes almost entirely to support instruction in the Writing Program, primarily through the stipends paid to our GATs. Our GATs will therefore bear the brunt of this mandate.

In the English Department, GATs normally teach two writing courses a semester, a load that, by my computation, requires even the most efficient of them to work more than eight 40-hour weeks a year beyond the 640 hours they are paid for. In the past five years, with the support of the COH administration, the English Department found ways to offer some relief to our heavily burdened GATs by reducing their typical load of 4 writing courses a year by one course during 4 of the years of their graduate study--in their first year of teaching, for example, and while they are working on their dissertations. You should know that many of our peer institutions require GATs to teach 2 courses a year, or 1, or none in their first and last years. These releases have enabled us to stay within hailing distance of the competition, which in the case of RCTE, is the other top 3 or 4 programs in the country.

In *all* the programs in English, our ability to recruit excellent graduate students directly affects the quality of instruction in the Writing Program. The quality of the Writing Program is crucial to the quality of the education in RCTE. To have to hire on the terms we have been given will therefore harm the GATs from all programs AND the Writing Program and undermine the declared purpose of the hire—to support the RCTE program.

Our commitment to the writing ability of our students—the commitment of the University of Arizona faculty combined with the commitment of the English Department--have, over the years, with the many changes and adaptations required by changing circumstances, produced an environment for writing of which the university can still be proud, even in these budgetary times.

But if the three urgent problems I have identified for you today are not addressed—support for the Writing Center, support for the Writing Program, support for the GATs--

and addressed this year, I can promise this body that the excellence we have gotten used to will not be sustained and that the problems associated with the run-of-the-mill writing programs that are to be found at most institutions will rapidly begin to appear and multiply.

It should be noted that addressing these problems will NOT require MORE resources than the English Department has had in the past. It would not even require the SAME resources it has had. It would require only some wise choices and a recognition that SOME resources must be found if a recognized focus of excellence is not to be lost.

What can the Senate do? Not much in terms of allocating or re-allocating resources. But perhaps something--and something very significant: remind those who CAN make these choices of their responsibility to support writing in this university, and let them know that we think it would be tragic, given our commitment to focused excellence, to let these existing areas of excellence wither-- tragic for us, and more importantly tragic for our students and the public that we as a landgrant university are committed to serve.

**Writing Program and Graduate Students**
**Department of English**
**Spring 2006**

The Writing Program at The University of Arizona supports graduate students in professional development in the following ways:

**Teaching**

- Opportunities to teach 9 different first-year composition courses ranging from basic writing, regular composition, ESL composition, and honors composition;
- Opportunities to teach upper-division writing courses in advanced composition and professional and technical writing;
- One year preceptorship and intensive mentoring to teach college level writing (for credit) in the first year as a GAT.

**Committees**

- The Writing Program Advisory Committee (WRIPAC) – GATs from the English Graduate Union EGU), Writing Center, Writing Program Interns and Coordinators, and editors of custom publications all have a representative on WRIPAC, which meets 4 times a semester to make decisions on curriculum and policies;
- Diversity and Inequality Committees – there are two of these – one in EGU and one as a subcommittee of WRIPAC. GATs sit on both, helping to advise on initiatives to diversify both methods and methodologies in the curriculum.

**Professional Development Opportunities**

- Writing Program Interns (2) – organize Department of English/Writing Program annual conference; review and assess curriculum and instructional support and teacher training, work on outreach on the UA campus and in the community in support of writing initiatives;
- Academic Transfer Assistants (2) – evaluate transcripts and transfer materials; organize and staff late registration; evaluate CLEP exams and transfer portfolios; work with Orientation and Admissions to evaluate transfer students;
- Writing Center Coordinators (3) – oversee the University of Arizona's Writing Center; teach English 393 (course to train peer undergraduate writing tutors); schedule and supervise peer consultants (writing tutors); liaison with satellite writing centers on campus; develop writing workshops for special populations; initiate new channels of service to the UA community and develop Writing Center projects;
- Custom Publishing Editors (3) – edit the Writing Program's custom publication (used in all first-year composition courses), *The Student's Guide to Composition*; organize the Student Essay Contest and event; develop online materials for the *Guide;* obtain copyright/publication releases for *Guide;*
- Computer Coordinator (1) – work with all course directors in first-year composition on issues affecting curriculum and pedagogy in areas of technological application and diversity.

Dr. Anne-Marie Hall, Director – Writing Program (ML 380)
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**Writing Program and Graduate Students**
**Department of English - University of Arizona**

I. **Three arguments for small class sizes in introductory writing classes:**

- **Policy** – The National Council of Teachers of English and the Conference on College Composition and Communication recommend a cap of 20 students for regular composition, 15 students for basic writing, and 15 students for ESL composition. http://www.ncte.org
- **Research** – While higher class sizes ease budget concerns, research shows that smaller class sizes enable good teaching, encourage more thoughtful writing assignments and considerable writing on the part of students, and thoughtful feedback from teachers. For a bibliography on research on the effect of class size on college writing class, go to http://www.cwrl.utexas.edu/~roberts-miller/Classsize.html
- **Practice** – Most research universities cap first-year composition and basic writing because these courses are taught by graduate students who must also find time for their own research and studies.

II. **Comparison of class sizes in PAC-10 schools (USC, UO, OSU not available):**

| Institution | Regular FYC | Basic FYC |
|---|---|---|
| Stanford | 15 | |
| Arizona State University | 19 | 19 |
| UCLA | 20 | 20 |
| University of Washington | 22 | 18 |
| Washington State University | 25 | 20 |
| University of Arizona | 25 | 23 |

III. **GATs on .5 appointment (2 classes/semester) teaching in the Writing Program:**

- **Compensated Time:**
  20 hrs/wk x 16 wks/semester = 320 hours/sem (160 hrs/class/sem)
- **Actual Time:**
  Class Time + Planning/preparation = 288 hrs/sem (144 per class/sem)
- **Response to Writing Time:**
  20 students/class x 2 classes x 5 hrs/students = 200 hours
  22 students/class x 2 classes x 5 hrs/students = 220 hours
  25 students/class x 2 classes x 5 hrs/students = 250 hours

FACTS:

- **Total time for GATs to teach 2 writing courses: 288 + 250 = 538**
- **Hours donated to UA in a semester by GATs teaching 2 writing classes: 218**
- **Hours available in a semester for responding to student writing (if GAT works for contracted hours only): 32 or 4.7 minutes per student (50 students x 3 essays in a semester)**
- **Pay per hour – contracted: $15.03**
- **Actual pay per hour: $9.29**

**Writing Center Statistics**
**Fall 2005**

Appointments/Students Served

| | |
|---|---|
| Freshman | 836 |
| Sophomore | 204 |
| Junior | 199 |
| Senior | 186 |
| Graduate | 200 |
| Unknown | 162 |
| | **1787** |

Majors Served

| | |
|---|---|
| Civil Engineering | 162 |
| Marketing | 836 |
| Nutritional Sciences | 199 |
| Classics/Anthro | 186 |
| Pre-Business | 204 |
| Unknown | 200 |
| | **1787** |

ESL Students Served - 127

Courses Served

| | |
|---|---|
| Incomplete Info | 1045 |
| First-Year Comp | 355 |
| English | 42 |
| Other courses | 345 |
| | **1787** |

Percentage of Courses by Department (of 742 known courses)

| | |
|---|---|
| First-Year Composition | 47.8% |
| English | 5.7% |
| Other Courses | 46.5% |

Dr. Anne-Marie Hall
Director – Writing Program
University of Arizona
hall@email.arizona.edu

For Faculty Senate Agenda Item 6

***CONSENT AGENDA***
***Faculty Senate Meeting February 6, 2006***

**Instruction and Curriculum Policy Committee**

CONSENT AGENDA

## Item 1

**Approval to change the name of the undergraduate major and minors in General Biology to Biology.**

**Projected effective date:** Fall, 2006

**Description:** The Department of Ecology and Evolutionary Biology requests a name change of the undergraduate major in General Biology to Biology and the undergraduate minors in General Biology and General Biology Teaching to Biology and Biology Teaching.

**Justification:** The term "General Biology" is a relic of the reorganization of biology on campus some 25 years ago and is unique among our peer institutions. Throughout the United States, the standard designation for the undergraduate major in Biology is either "Biology" or "Biological Sciences".

Revising the name of the major will appropriately convey the non-specialized and integrative nature of the program while eliminating redundancy, reflecting the prevailing name choice at peer institutions, and increasing the clarity of the major for students and their future employers.

**Approvals:**

**Undergraduate Council:** 11-22-2005
**Graduate Council:** NA
**Administrative Review:** PMG – 12/13/05, AD – 12-19-05
**ICPC:** 1-18-06 approved 6-0-0 with three members absent

## Item 2

Approval of the implementation of the Arizona-Leipzig Joint International Ph.D. with a major in Transcultural German Studies

**http://www.registrar.arizona.edu/logon/PDF/TranscultGerman/TransculturalGerman_PhdProgram.htm**

**Projected effective date:** Fall, 2006

**Description:** The Department of German Studies is proposing the implementation of a new Arizona-Leipzig Joint International Ph.D. with a major in Transcultural German Studies. Doctoral students from the University of Arizona, Department of German Studies, will earn a UA degree and will spend two semesters taking courses at the University of Leipzig in Leipzig, Germany. Doctoral students from the University of Leipzig will earn a degree from the University of Leipzig and spend two semesters at the University of Arizona taking course work. Candidates from both universities will have the opportunity to teach German Language courses as Graduate Assistants in Teaching at the respective Universities.

**Justification:** This is the first program in the United States to combine the strengths of a major German and American Research I University to create an international Ph.D. program in German Studies. Program graduates will have an exceptional grounding in cultural, literary, and language studies from interdisciplinary, cross-and transcultural perspectives. The program targets groups of students aspiring to pursue academic careers relating to national and international educational, cultural, and linguistic interests in Germany, the United States of America, and a variety of other countries.

**Approvals:**

**Undergraduate Council:** NA
**Graduate Council:** 11-18-05
**Administrative Review:** PMG – 12-13-05, AD – 12-19-05
**ICPC:** 1-18-06 approved 5-0-1 with three members absent

For Faculty Senate Agenda Item 7
February 6, 2006

THE UNIVERSITY OF
ARIZONA.
TUCSON ARIZONA

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January 22, 2006

TO: Faculty Senate

FR: J. Pat Willerton, Chair, Instruction and Curriculum Policy Committee

RE: Revised graduate certificates policies and procedures document

ICPC has approved and is bringing before the Faculty Senate revised policies and procedures governing official University of Arizona graduate certificates. These revised policies and procedures are the result of ICPC deliberations of January 18, 2006, when the Committee, together with Graduate College Associate Dean Dianne Horgan, reviewed the policies and procedures developed and applied by the Graduate College in approving graduate certificates.

ICPC (May 2004) had originally requested that the Faculty Senate ask the Graduate College to establish university-wide criteria and procedures for awarding graduate certificates. ICPC further recommended that the Graduate College proposal (dated 7 April 2004) for establishing guidelines for formal graduate certificates be viewed as a model, and those policies and procedures were subsequently used in evaluating proposed graduate certificates. However, the Faculty Senate, together with ICPC acting as the Senate's vetting instrument, never formally reviewed or approved those policies and procedures, leading to a concern within ICPC and the Faculty Senate Executive Committee that these bodies should review and formally approve the policies and procedures that have been in place and used to date. ICPC's January 18, 2006 action represented this Committee's formal approval and recommendation to the Faculty Senate to adopt the Graduate College policies and procedures. During the January 18 meeting, ICPC did request a couple of modest changes (e.g., rephrasing "transferable units" to "duplicate units," and explicitly specifying these are graduate certificate policies) that are included in the document, "Policies and Procedures for Official University of Arizona Graduate Certificates," that is now being forwarded to the Faculty Senate.

In addition to forwarding for Faculty Senate approval this graduate certificates policies and procedures document, ICPC has encouraged the Graduate College to create a summary review template that will permit ICPC members to expeditiously evaluate the contents of graduate certificate proposals to determine they follow approved guidelines. ICPC anticipates its members will be provided with summary information on the approved template together with all relevant documentation for proposed graduate certificates. Upon approval, ICPC would move proposed graduate certificates to the full Senate as consent agenda items. We believe this revised document of policies and procedures, together with a new template for more efficient review of proposed graduate certificates and related support documentation, will permit a more streamlined and efficient faculty review process.

# Policies and Procedures for Official University of Arizona Graduate Certificates

- A certificate is a specialized package of courses and/or curriculum. The certificate should enhance existing programs, not appear to take the place of them. Sufficient resources must exist to support the certificate without penalizing existing academic programs including options and minors.

- Only officially approved UA certificates shall be posted to transcripts. The certificate document awarded for completion shall not resemble a UA diploma in any way and shall be awarded through the Graduate College.

- Any certificate program offered by a department/college which is not officially UA approved must state same when advertising the certificate.

- Certificates may have the same name as a degree program but shall have a full name that makes it distinct from the degree program and includes the level of the certificate, i.e., Post Graduate Certificate in Medical Ethics or Business Project Management Certificate.

- Options may not be offered under an approved University of Arizona Graduate Certificate.

- Candidates should meet Graduate College admission requirements and applicants shall have no less than a bachelor's degree or its equivalent.

- Certificates can be free standing or linked to an existing degree program

- Maximum duplicate units from a certificate applicable to a degree program shall be no more than 12.

- Maximum duplicate units from a degree program applicable to a certificate shall be not more than 6.

- For two or more related certificate programs with proposed units in common, contact the Graduate College for requirements.

- Course work taken more than two years prior to admission to the certificate program may not be transferred.

- All university and Graduate College policies should apply including admission, retention, eligibility for fellowships/assistantships, contact hours, and faculty eligibility to teach.

- Time to completion shall not exceed four (4) years.

- An oversight committee with an academic director shall be responsible for:
    - Qualifications of participating faculty
    - Coordination of admission recommendations with the Graduate College
    - Oversight of curricular changes
    - Completion of the approved program of study and notification of the Graduate College

- Academic units applying for certificates must consult with related programs, departments to avoid unnecessary duplication.

- Any change in the originally approved certificate shall be approved by the Graduate College prior to implementation. If there is a 10% change to curriculum a copy must be submitted to the Graduate College.. If curriculum changes by 25% or more a memo must be submitted describing the curricular changes and the necessity for doing same.

- Certificate programs may be terminated at any time by the offering academic department and approval of the Graduate College. Students currently enrolled should be accommodated until completion of their certificate program.

- Certificates should be included in academic program review process.

# University of Arizona
# Format and Guidelines
# For
# Graduate Certificates

## I. Certificate name and description:

- Name of the certificate - *Name should include the level and title of certificate as Post-Master's Certificate in Medical Anthropology or Post-Master's Medical Anthropology Certificate. Any graduate academic certificate must be clearly identified and labeled as an academic certificate program in official publications.*
- Managing department college, department, and oversight committee membership.
- Specify whether the certificate is affiliated with an existing degree program or is a stand-alone certificate.

## II. Certificate Requirements – Any changes to the originally approved certificate must be approved by the Graduate College.

- List the certificate requirements, including number of credit hours required and any special requirements for completion. *Certificate requirements should include sufficient units to provide a substantive program and an appropriate level of academic rigor and in no case be less than 9 units of credit.*
- List current and new courses needed to meet certificate requirements. *New courses should be designated as such and include a proposed catalog description. No less than 50% must be taken for a regular letter grade.*
- Describe any courses that will be offered via distance learning or other distributed methods?
- Student Learning Outcomes - *Describe what students should know, understand, and/or be able to do at the conclusion of this certificate.*

## III Student Admittance/Advising/Completion – *Student must have no less than a bachelor's degree for a post-baccalaureate, a master's degree for a Post-Master's certificate or be currently enrolled in a graduate level program..*

- Are there prerequisites or standardized tests required for admission?
- Is concurrent enrollment in a degree program allowed, required?
- Is there a University credit requirement? *University credit is the term used to identify all credit offered by The University of Arizona with the exception of correspondence and Special Examination for Credit.*
- Will transfer credit from other institutions be accepted? How many credit hours maximum? (May not exceed 6)
- What provisions are included for student advising?
- May a student change from a certificate to a degree program? What are the provisions?

## IV. Certificate and Student Outcomes

- Provide a plan and frequency for assessing the intended certificate outcomes both for students and the certificate.

## V. Is there sufficient student demand for the certificate?

- What is the anticipated student enrollment for this certificate?

- Will there be any collaboration with other departments or universities to maximize resources?

- Program demand/need. *Will the certificate serve a community need, preparation for professional certification exams, degree program recruitment, employability enhancement, or other.*

## VI. Expected Faculty and Resource Requirements

- List the name, rank, highest degree and estimate of level of involvement of all current faculty who will participate in the program.

- Describe additional faculty needed for the first three years of the certificate.

- Give the present numbers of FTE students and FTE faculty in the department or unit in which the certificate is offered.

- Give the proposed numbers of FTE students and FTE faculty for the next three years in the department or unit in which the certificate is offered.

- Provide a copy of the current department budget and note any impact the approval of the certificate could have on department resources.

## VII. Submit a supporting letter from the college dean and department head verifying that the proposed certificate has received faculty approval through appropriate procedures and that the unit has the resources to support the certificate as proposed.

# Approval Routing for Graduate Certificates

The process for approval of Graduate Certificates is abbreviated if the proposal adheres to the guidelines in Policies and Procedures for Official University of Arizona Certificates.

- Submit proposal documents with signature of the Department Head(s) and College Dean(s) to the Office of Curriculum and Registration. Office of Curriculum and Registration will forward to the Graduate College.
- Graduate Council or designee approves.
- Provost's Management Group approves.
- Instruction and Curriculum Policy Committee approves.
- Faculty Senate approves

If the proposed Graduate Certificate falls outside the guidelines, the approval process is the same as for a new program.
For more information or questions, please contact Sandra Beeler at:
beelers@u.arizona.edu, 621-1847.

Office of the Dean
Graduate College

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***MEMORANDUM***

**TO:** Faculty Senate

**FROM:** Dianne Horgan, Associate Dean

**SUBJECT:** Graduate Certificates

**DATE:** April 7, 2004

The purpose of this memo is twofold:

1. To establish guidelines for formal graduate certificates. A 'formal' graduate certificate is listed on the transcript.
2. To establish a fast-track procedure for approving graduate certificates.

There is growing interest in certificate programs at UA and across the country. A graduate certificate comprises a linked series of credit-bearing graduate courses that constitute a coherent body of study. Graduate certificates are designed to enhance the education of matriculated graduate and professional students or to provide continuing education to local professionals.

In 1997, the Council of Graduate Schools (CGS) began a series of studies on graduate certificates,[1] finding that "this area of post-baccalaureate study has been recently

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[1] *Post-Baccalaureate Certificates: A First Look at Graduate Certificate Programs offered by CGS Member Institutions*, Stephen Welch and Peter Syverson, CGS Communicator, Council of Graduate Schools, Washington, DC, Vol. XXX, No. 9, November 1997.

*Certificates: A Survey of Our Status and Review of Successful Programs in the U.S. and Canada*, a collection of occasional papers, Council of Graduate Schools, Washington, DC, 1998. (www.cgsnet.org/certif.htm).

*A Survey of Graduate Certificate Policies, Procedures, and Programs*, Wayne Patterson, University of Charleston, SC and Dean in Residence, Council of Graduate Schools, Charleston, SC, 1998. (www.cofc.edu/~wayne/gradcerts.html).

*Summarizing Data on Certificate Programs*, Wayne Patterson, Dean-in-Residence, Council of Graduate Schools, March 1999. (www.cgsnet.org/pdf/SummarizingData.PDF).

*Analyzing Policies and Procedures for Graduate Certificate Programs*, Wayne Patterson, Dean-in-Residence, Council of Graduate Schools, July 7, 1999. (www.cgsnet.org/pdf/AnalyzingPolicies.pdf)

reinvigorated, broadened, given a new and different focus, and provided a much closer alignment of graduate education with the needs for workforce development. . ." While the majority of certificates are in response to workforce needs, the range of certificates is large. For example, some universities offer certificates to provide background for students to apply to medical, law, or business schools. Many offer certificates in specialty areas for which they lack resources or sufficient market for a degree such as Women's Studies or Ethnic Studies. Some offer certificates for their degree-seeking students to boost their employment options. Others use certificates to 'refresh' knowledge for earlier graduates (similar to, but more in-depth and organized than CEU units required by some professional licensing). Certificates exist at the post-baccalaureate, post-master's, and post-doctoral level.

Patterson (1999) reports on a study of for-credit certificates in 110 universities (75.5% public, 28.2% Research I). Participants included Arizona State, Columbia, Duke, Harvard, UNC, University of Washington, Indiana University, Johns Hopkins, Penn State, UCLA, UC San Diego, University of Colorado, and University of Minnesota.

**Selected findings for Research I universities**

- 84.6% have both free-standing and add-on certificates.
- 46.2% of certificates have a partial overlap between the curriculum of the certificate and some related degree program.
- 15.4% have total overlap with a related degree program.
- 61.5% of universities administer certificates in the Graduate College
- 84.7% show the certificate on the transcript. CGS suggests this as a Best Practice.
- The average minimum number of credits is 13.2. CGS suggests no fewer than 9 hours and no more than half that required for a related master's degree.
- 15.4% of certificates have no requirements beyond coursework.
- 33.3% require certificates to be revenue-producing.
- 11.1% of certificates have higher tuition than degree programs.
- 25% of institutions report more student diversity in certificate programs than in their degree programs.

Different universities have different models for their graduate certificates. Wisconsin, for example, offers two types of graduate certificates. One is for currently enrolled graduate students. Areas in which these certificates are offered include African Studies, Air Resources Management, Bioinformatics, Educational Administration, Energy Analysis and Policy, Engineering Management Specialization, European Studies, Gerontology, Russian, East European, Central Asian Studies, Southeast Asian Studies, Teaching and Learning Scholarship in Higher Education, Teaching English to Speakers of Other Languages (TESOL), Technical Communication, and Women's Studies.

In addition, Wisconsin offers a second type: 'capstone' certificates for students not currently enrolled in a UW-Madison degree program. These are designed to "cap off" undergraduate training or to accommodate professionals returning to school for specialized training in the area of the certificate. Examples include Bioinformatics,

French Studies, Fundamentals of Clinical Research, Geographic Information Systems, and Public Affairs.

The University of Michigan defines a graduate certificate as "a non-degree credential designed to provide students with specialized knowledge that is less extensive than a master's program." They require a minimum of 15 hours, and not more than half of the credits may be double-counted with a degree. Just as for their master's they require a 3.0 GPA and work to be completed within 6 years. Certificates are offered in Cellular Biotechnology, Complex Systems, Culture and Cognition, Film and Video Studies, Industrial Ecology, Latin American and Caribbean Studies, Russian and East European Studies, Simulation and Gaming Studies, Spatial Analysis, Survey Methodology, Transportation and Logistics Studies, and Women's Studies.

Stanford offers, in addition to a variety of on-campus certificates, more than 25 distance learning certificates to non-Stanford students through their Professional Development center. These are a minimum of 3 courses.

There are many advantages to certificates. Among these:

- Certificates help meet the needs of the community in a flexible and timely fashion.
- Certificates are a useful recruitment tool for degree programs and they may increase diversity.
- Certificates attract international students. In general, F-1 visas are not available to non-degree students; the establishment of formal certificates would allow us to bring in more international students.
- Certificate students are eligible for financial aid.
- Certificates offer opportunities for distance learning.
- Graduate certificates not only produce significant tuition, they are often candidates for program fees.
- Certificates encourage innovation and may serve as incubators for new degree programs.
- Certificates encourage interdisciplinary work.
- Certificates are excellent public relations tools and are popular with state legislators.

Currently, UA has a number of *unofficial* graduate certificates. We have little control over these; we often do not even know they exist. Furthermore, these students are registered as non-degree. With over 1000 graduate non-degree students generating high rates of net tuition revenue, we need to ensure that we give them something of value. While the bulk of certificates are in the Eller College, Engineering, and Nursing, there are also well-established certificates in, for example, Preservation Studies, Optical Science, and Clinical Research Trials.

Therefore, to be consistent with our peers, to ensure quality, and to better serve students and the community, we would like to formalize academically rigorous certificates.

Having formal certificates would allow us to

- list approved graduate certificates in the catalog,
- list completion of certificates on transcripts, and
- admit certificate students to a program rather than as non-degree. This would help us monitor and serve non-degree students, make certificate students eligible for financial aid, make international students eligible for visas, and allow us to count certificate students in production statistics.

In February 2001 the Certificate Committee (Anita McDonald, Adela Allen, Liz Armandroff, and Bill Barrett) recommended a "fast-track" approval process. This proposal follows up on their work with some specific minimum criteria for certificates and a proposal for a fast-track approval process.

**To have certificates formalized**, we recommend the following:

- A proposal on file with Curriculum Office
- Departmental and college level approval
- Graduate Dean approval
- Review and approval by ICPC
- Review and approval by Faculty Senate
- Provost approval
- A minimum of 9 credit hours
- An application form, with established admission standards and procedures. Students must meet minimum Graduate College admission standards.
- Degree certification done by the Graduate College with established minimum standards including these:
  - a minimum cumulative GPA of 3.0,
  - all courses must be those that can normally be applied toward a graduate degree,
  - no more than one GRO, no more than one C, and
  - at least 50% of credits must be letter graded.
- Any new courses would go through the regular course review/approval process.
- Certificate programs would undergo periodic review in regular academic unit APRs.

**Questions for proposals**. A proposal format is being developed which will address the following issues.

- Will the certificate be an add-on (linked to an existing degree program) or free standing?
- Will concurrent enrollment in degree program be allowed?
- Will concurrent enrollment be required?
- What is the relationship between certificate and degree programs; e.g., can some of the same courses apply toward either?
- How many hours are required for the certificate? How much overlap with degree programs (or other certificates) will be allowed? How many hours from a

certificate may be transferred to degree? May a student transfer from certificate to degree program?

- Will there be time limits and if so, what are they?
- How will the certificate program be reviewed or evaluated?
- How will the certificate program be funded? Will there be a request for program fees?

For Faculty Senate Agenda Item 8
February 6, 2006

THE UNIVERSITY OF
ARIZONA.
TUCSON ARIZONA

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**MEMORANDUM**

**DATE:** December 14, 2005

**TO:** Dr. Jennifer Jenkins, Chair
Committee on UHAP, Constitution and Bylaws Changes

**FROM:** Dr. Lawrence Aleamoni, Chair
Academic Personnel Policy Committee

**RE:** Proposed change to UHAP 3.12.08, Appeals to the President

Earlier this fall, APPC was asked by the Vice Chair of the Faculty to consider propose new language for the appropriate section of the University Handbook for Appointed Personnel to correct a very real problem regarding slow responses from the President regarding appeals of tenure denials. There are timelines and deadlines for virtually every step of the promotion and tenure/continuing status process EXCEPT for the President's response to an appeal of the Provost's negative tenure decision. In recent years, Presidential decisions have taken nearly the full year of the terminal contract, leaving affected faculty members with little time to make alternative plans if their appeals are unsuccessful. APPC carefully considered this concern and decided that a shorter timeline is appropriate and recommends the following addition to the third paragraph of UHAP 3/12/08 (highlighted):

**3.12.08 Appeals to the President**
In cases where the Provost has decided not to renew or has denied promotion or tenure to a tenure-eligible faculty member or promotion to a tenured faculty member, the faculty member may appeal the non-renewal or denial to the President. Such appeals must be filed in writing with the Office of the President within 30 days after notice of the Provost's decision. The President's review shall be limited to the record compiled under Section 3.12.07.

Before reaching a decision the President may seek or may ask the departmental standing committee on faculty status to seek additional assessment from outside the department and/or the University regarding the candidate's professional accomplishments, stature as viewed by peers, and scholarly potential. However requested, these assessments are to be commented on successively by all levels of review previously involved, and then forwarded for the President's consideration. Outside assessments shall be solicited with the promise of confidentiality. In selecting peers to provide such assessments, the spirit of the guidelines and procedures used by the candidate's home department are to be followed.

The President's decision shall be issued in writing and forwarded to the faculty member involved, with copies to the Provost and the appropriate dean and department head, within three months of notice of appeal. The President's decision is final. However, the Committee on Academic Freedom and Tenure may subsequently consider allegations of unlawful discrimination or other unconstitutional actions and may recommend further review or action. The President may then direct that such additional review or action be taken; otherwise, the matter is not subject to further review.

# The NRC Assessment of Doctoral Programs

## Short Description

The National Research Council, which conducted assessments of doctoral programs in 1983 and 1995, proposes to conduct a new study, the purposes of which are to:

- Help universities improve their doctoral programs through benchmarking.
- Expand the talent pool through accessible information, easily available to potential doctoral students, about doctoral programs.
- Benefit the nation's research capacity by improving the quality of doctoral programs and their students.

The study will be a marked departure from earlier studies. Although it will proceed primarily through questionnaires to universities, programs, faculty, and students (for a few fields), it will gather information about quantitative variables that are related important factors such as:

- Scholarly productivity and impact of program faculty
- Effectiveness of doctoral education
- Research resources
- Demographic characteristics of students and faculty
- Resources available to doctoral students
- Characteristics of the doctoral program.

These data, collected under uniform definitions; will be used to construct a large web-resident database for about sixty fields of study, thus permitting comparisons of programs within a university and across universities. The database will be constructed so that it can be updated regularly.

*Uses of data*

Analyses using the database will be informative to a variety of users:

- **Students** will be able to look within their field at the characteristics of available doctoral programs. They will be able to compare attrition and completion rates, time to degree, research productivity of faculty, size of program, and program specializations. Such data should help them match their own preferences to program offerings, while at the same time encouraging programs to improve in those areas where they feel it would be useful to do so.
- **Programs** will be able to compare themselves to peer programs and then focus on measurable ways to improve. They may also use the data to assist in strategic planning and to focus their resources. A publicly available, updatable data set will give incentives for continuous improvement.
- **University administrators**. Most university departments undertake periodic self-studies and undergo periodic review; a sound, comparable database across the research universities can provide a valuable starting point for review of doctoral programs. Even in the most highly reputed universities, individual programs may rest on their laurels while programs elsewhere are improving. The study will provide a verifiable basis for such observations. Perhaps most importantly, collecting the

correct kind of information will lead to programs to think about their performance from the students' point of view.

- **Research sponsors**. Although graduate education is not the primary mission of most research funders, graduate students are key personnel in the research enterprise. This study will make it possible to examine the educational effectiveness of programs alongside research resources and scholarly productivity. Better practices and information may make graduate study more attractive to smart students who have many attractive alternatives.

*What about rankings?*

The project will produce rankings based on variables identified as significant through field-by-field surveys. In addition, the database will permit a variety of approaches to ranking doctoral programs across numerous dimensions. Rankings can be constructed using weighted averages of a subset of measured characteristics. Derivation of the weights needs to be transparent and easily explained or such rankings would appear capricious. At least two approaches will be made available by the project for constructing weighted averages to produce rankings of various types:

- One approach will derive weights of measured characteristics for a field from a stratified sample of faculty, drawn at random within each stratum. The views of this representative sample will be used to derive weights relevant for the field. Rankings will be constructed, and this information for each field will be made available with the database.

- A second approach that will be used is to provide software for users permitting them to construct customized indices using their own weights for their own subset of measures and applied to a chosen set of programs. Although this approach might appear chaotic, it could result in informative discussions in which priorities, represented by differential weights, are made explicit and justified.

*Conclusion*

This new approach is flexible and can be tailored to each university's needs. It encourages use of the data, analysis, and timely updating. It provides data that are useful in demonstrating accountability while providing incentives to doctoral programs for continuing improvement. Rankings will be based on specific criteria that are recognized to be valid in each field.

## *NRC TAXONOMY*

**LIFE SCIENCES**

Biochemistry, Biophysics, and Structural Biology
- Biochemistry
- Biophysics
- Structural Biology

Cell Biology

Developmental Biology

Ecology and Evolutionary Biology
- Behavior and Ethology
- Biogeochemistry
- Evolution
- Physiological ecology
- Population biology
- Terrestrial and aquatic ecology

Genetics, Genomics and Bioinformatics
- Bioinformatics
- Genetics
- Genomics

Immunology and Infectious Disease
- Immunity
- Immunology of Infectious Disease
- Immunopathology
- Immunoprophylaxis and Therapy
- Parasitology

Microbiology
- Enviromnental microbiology and ecology
- Pathogenic microbiology
- Microbial physiology
- Virology

Molecular Biology

Neuroscience and Neurobiology
- Molecular and cellular neuroscience
- Systems neuroscience
- Computational neuroscience
- Cognitive neuroscience

Pharmacology, Toxicology and Enviromnental Health
- Pharmacology
- Toxicology
- Environmental health
- Medicinal/Pharmaceutical chemistry

Physiology
- Systems and Integrative Physiology
- Comparative Physiology
- Cellular Molecular Physiology

Plant Sciences
- Agronomy and crop sciences
- Horticulture
- Plant pathology
- Forestry and forest sciences
- Plant breeding and genetics

Food Science and Engineering
- Food engineering and processing
- Food microbiology

- Food chemistry
- Food biotechnology

Nutrition
- Animal
- Human, community and international

Animal Sciences
- Domestic animal sciences
- Wildlife science
- Aquaculture and fisheries

Entomology

Emerging fields:
- Biotechnology
- Systems biology

**ARTS & HUMANITIES**

English Language and Literature
- English literature to 1800
- English literature since 1800 (including Anglophone)
- American literature
- Ethnic and minority American literature
- Theory
- Cultural studies
- Feminist, gender and sexuality studies

Music (except performance)
- Composition
- Musicology
- Ethnomusicology

History
- United States
- European
- Latin American
- Asian
- African
- Middle Eastern
- Intellectual history (including history of culture, science, technology and medicine)

History of Art, Architecture and Archaeology
- Ancient, Medieval, Renaissance and Baroque art and architecture
- American art
- Modern art
- Asian art
- Theory and criticism

Philosophy
- History of philosophy
- Metaphysics
- Philosophy of science
- Epistemology
- Philosophy of mind and Language
- Ethics and political philosophy

Religion

Spanish and Portuguese Language and Literature
- Spanish linguistics
- Spanish literature
- Portuguese literature
- Latin American literature

Comparative Literature

French and Francophone Language and Literature
- French linguistics
- French and Francophone Literature

German Language and Literature
- German literature
- German linguistics

Classics
- Classical literature and philology
- Ancient history (Greek and Roman through late Antiquity)
- Ancient philosophy
- Classical archaeology and art history
- Indo-European linguistics and philology

Theatre and Performance Studies
- History of theatre and drama
- Performance studies
- Theory

American Studies

Global Cultural Studies
- Slavic Studies
- East Asian Studies
- Latin American Studies
- Near Eastern Studies
- African Studies

Emerging Fields:
- Race, ethnicity and post-colonial studies
- Film studies
- Feminist, gender and sexuality studies

**PHYSICAL SCIENCES, MATHEMATICS AND ENGINEERING**

Chemistry

Analytical Chemistry

Biological Chemistry

Inorganic Chemistry

Organic Chemistry

Physical Chemistry

Physics
- Atomic, Molecular and Optical Physics
- Cosmology, Relativity, and Gravity
- Condensed Matter Physics
- Elementary Particles, Fields, and String Theory
- Engineering Physics
- Fluids
- Nuclear Physics
- Plasma Physics
- Quantum Physics

Applied Mathematics

Mathematics
- Logic
- Topology
- Algebra, number theory and algebraic geometry
- Analysis
- Discrete mathematics and Combinatorics
- Geometry

Computer Science

- Artificial intelligence
- Theory
- Systems
- Programming languages

Earth Sciences
- Soil Science
- Geology
- Geochemistry
- Paleontology
- Geophysics and seismology
- Environmental sciences

Oceanography and Atmospheric Sciences and Meteorology
- Oceanography
- Atmospheric sciences
- Meteorology
- Fresh water studies

Statistics and Probability
- Biostatistics
- Probability
- Statistical theory

Astrophysics and Astronomy

Electrical and Computer Engineering
- Computer engineering
- Communications engineering
- Electrical and electronics

Mechanical Engineering

Chemical Engineering

Civil and Environmental Engineering
- Environmental engineering
- Environmental fluid mechanics and hydrology
- Environmental systems engineering
- Geotechnical engineering
- Remote sensing
- Structural engineering
- Transportation systems engineering
- Water resource systems

Materials Science and Engineering
- Structural
- Biological and Bio-inspired materials
- Functional and device materials
- Environmental materials

Aerospace Engineering

Biological and Agricultural Engineering
- Bioinstrumentation and Measurement including microscopy and imaging
- Agricultural Engineering, including microbial systems
- Systems biology

Biomedical Engineering
- Biomolecular Engineering, including cell and tissue engineering
- Biomechanics

Operations Research, Systems Engineering and Industrial Engineering
- Operations research
- Systems engineering
- Industrial engineering

Emerging Field:

Nanoscience and nanotechnology
Information science

**SOCIAL AND BEHAVIORAL SCIENCES**

Psychology
- Clinical and abnormal psychology
- Cognitive psychology
- Developmental psychology
- Industrial and organizational psychology
- Social psychology
- Biological psychology

Economics
- Econometrics
- Economic theory
- Industrial organization
- Labor economics
- Public economics
- Growth and development
- International economics
- Behavioral economics

Agricultural and Resource Economics

Linguistics
- Applied (includes Second language acquisition)
- Comparative and historical linguistics and linguistic diversity
- Computational
- Psycholinguistics
- Sociolinguistics
- Semantics, syntax and phonology

Political Science
- Political theory
- American politics
- Comparative politics
- International relations
- Public Policy
- Models and methods

Sociology
- Theory
- Methods and mathematical sociology
- Historical sociology
- Criminology
- Social stratification, including race and ethnicity
- Organizations, occupations and work

Anthropology
- Social and cultural
- Biological and physical
- Archaeological

Geography and Regional Science

Communication
- Speech and rhetorical studies
- Mass communications
- Communication studies

Emerging Field:
- Organizations, Occupations, and Work
- Science & technology studies

Last revised 11/21/03

# NRC: Assessing Research-Doctorate Programs

http://www7.nationalacademies.org/resdoc/index.html

The N.R.C. study is considered the gold standard for rating American graduate programs. According to the *Chronicle of Higher Education*, "…graduate students will use the N.R.C. study to decide where to pursue a Ph.D. Administrators will use it to consider which doctoral programs on their campuses deserve more money and which, perhaps, deserve to be overhauled or abandoned. State and federal policy makers will use it to determine whether taxpayers are getting their money's worth."

In 1995, 274 institutions participated, which is virtually all universities with research Ph.D.s.

# HAND OUTS

- New taxonomy (Not all doctorates included)
- NRC Assessment:  Short Description

# Who's NOT in the study

"A number of additional programs in applied fields urged that they be included in the study. The Committee decided not to include those fields for which much research is directed toward the improvement of practice. These fields include social work, public policy, nursing, public health, business, architecture, criminology, kinesiology, and education. This exclusion is not intended to imply that high quality research is not conducted in these fields. Rather, in those areas in which research is properly devoted to improving practice, evaluation of such research requires a more nuanced approach than evaluation of scholarly reputation alone. It should also include measures of the effectiveness of the application of research. The Committee's view is that this task is beyond the capacity of the current or proposed methodology." (p. 20)

# History of NRC Assessments

- 1982 "Assessment of Research-Doctorate Programs in the United States"
- 1995 "Research-Doctorate Programs in the United States: Continuity and Change"

# Perceived Weakness of Prior NRC Assessments

- Spurious precision of program rankings
- Confounding of research reputation and educational quality
- Ratings based on old data
- Poor dissemination of results for some audiences
- Taxonomy categories out of date
- Validation of data inadequate

# New Study

- Broader focus
  - Tool for students, including non-academic factors, quality of life measures (e.g., childcare)
  - Careers in biosciences, post doc info
  - Demographics
- Structure
  - New taxonomy (biomedical still under review)
  - Surveys
    1. Institutional (8/06)
    2. Fields/Programs (8/06)
    3. Students admitted to candidacy (Chem Engr, English, Microbio, Econ, Physics) (10/06)
    4. Faculty (10/06)
       a. For *all* involved in doctoral programs in taxonomy
       b. SAMPLE for ANCHORING STUDY
  - Faculty **lists** (8/06)
    1. For surveys (%s associated with each field, only UA faculty)
    2. For ANCHORING study, those who are associated with each field (no %s; "these are faculty associated with field X. Given this list and what you know about the program, how would you rate X at UA?" May include those who serve as special committee members)

# Anchoring Study

- Sample of faculty from each field asked to rate sample of programs in their fields from a sample of institutions
- Their ratings=dependent variable
- To validate quantitative measures (independent variables)
- To determine regression coefficients (for each field)
- Sample will also be asked for subjective weights
- Should reduce halo of reputational ratings
- Will be used to create (synthetically) ratings for programs

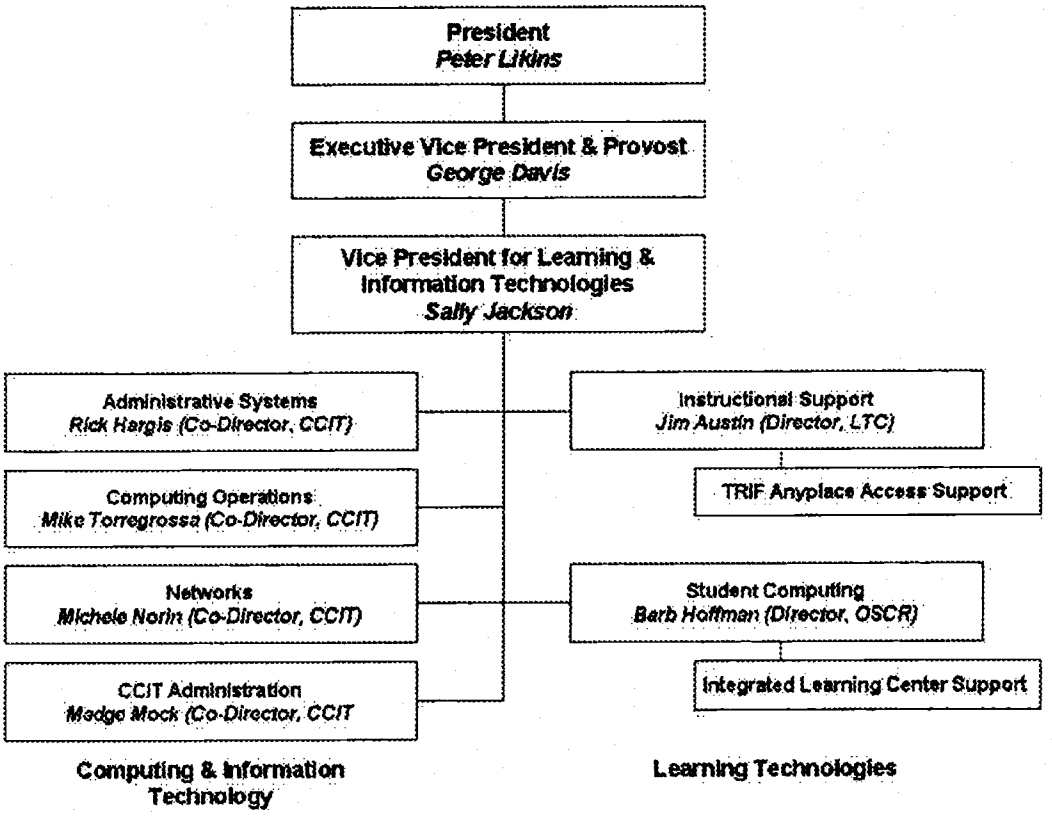
# Sample Factors

- Scholarly productivity and impact of program faculty
- Effectiveness of doctoral education
- Research resources
- Demographic characteristics of students and faculty
- Resources available to doctoral students
- Characteristics of each doctoral program

**Central Information Technology Functions: A Report to Faculty Senate**
***Sally Jackson, Vice President for Learning & Information Technologies***

Attached is a copy of a report recently submitted at the request of a committee of the Arizona Board of Regents. The Regents have been involved for several years in close scrutiny of how all three Arizona universities manage their IT environments, and over the past year and a half, the CIOs have been tasked with trying to achieve greater central coordination of IT expenditures and related activities.

At The University of Arizona, approximately half of all identifiable IT expenditure occurs within units reporting to me (shown in the organization chart below).




Significant additional IT expenditures occur within other Vice Presidential areas (for example, within the Financial Services Office and the Enrollment Management Support Group) as well as in all academic departments and colleges (chiefly in support of desktop equipment and research activity). Responding to the assignment from the Regents has pushed us to articulate ever more explicitly the relationship between core services that are provided centrally and specialty services that are provided departmentally. It has also exposed gaps in central services and redundancies between services provided centrally and services provided departmentally.

The purpose of this status report will be to review the work we have been doing with the Regents and to describe the opportunities we have uncovered for improving cooperation between central and departmental IT management.

# University of Arizona Centralization of Information Technology

**Telecommunications Network**

*Summary: The network should be managed centrally and for the most part already is. More complete assessment of the current situation and UA's comprehensive 10-year plan are documented at http://computing.arizona.edu/networkmasterplan/.*

| Specific Function | Current (April 2005) Situation | Plans for Centralization | Progress Toward Centralization |
|---|---|---|---|
| Campus Network | CCIT centrally controls the campus network. | An extensive Network Master Plan (NMP) has been developed, describing evolution of the centrally managed Campus Network over the next 10 years. 14 "project themes" have been identified within the plan. | All network-related projects are now planned within the framework of the NMP. A new funding model capable of supporting growth and change is on the IT Policy Group Agenda for January 2006, and sources of new funding are being identified project by project. |
| Optical Fiber and Ethernet Wiring | CCIT installs and maintains fiber and Ethernet to the Building Entrance and in most cases to the wall jack. A few departments maintain their own networks (known as CPE for "Customer-Provided Equipment"). | CCIT prefers to manage the network to the wall jack whenever possible and is assuming central control of CPE networks as upgrade cycles and departmental circumstances permit. | Since April 2005, CCIT has assumed control of 6 formerly CPE networks:<br>▪ Math Building<br>▪ Meinel Building<br>▪ Law College<br>▪ Campus Health<br>▪ Student Union<br>▪ College of Public Health<br>CPE networks are not being allowed in new construction. |
| Campus Wireless Network | About 10-15% of the campus now has wireless connectivity provided by CCIT. In addition, some departments maintain their own wireless LANs. | The NMP calls for centrally managed wireless access covering the entire campus. A special wireless strategy workgroup has been formed to study future trends. | Wireless network access is one of 14 project themes within the Network Master Plan. The expansion of coverage by the UA wireless network is kept up to date at http://computing.arizona.edu/uawireless/. The wireless strategy workgroup is nearing completion of its initial report. |

| | | | |
|---|---|---|---|
| Central Telephone Switch & Telephone Wiring | CCIT operates and maintains a single telephone switch. All telephone wiring is controlled by CCIT. | Over time, it is expected that centrally provided telephone service will shift toward VoIP (see below), but will remain centrally controlled. | To make CCIT more receptive to technology change, separate Voice and Data divisions of CCIT have been merged to create a unified Network Technology Solutions (NTS) division. |
| Storage Area Networking (SAN) | CCIT operates a multi-site SAN spanning its two data center facilities. Storage networking is not widely deployed at the network layer of the infrastructure. | CCIT plans to develop a storage service that allows for distributed and integrated physical components and support structure. The network component is included in the Network Master Plan. Storage hardware, software and support tools are being investigated. | Storage Area Network Architecture has been identified as one of 14 project themes within the Network Master Plan, and substantive progress is being made. Enterprise class storage switches have been implemented at CCIT facilities. Storage management tools and equipment have been acquired for pilot study. |
| Video Teleconferencing Systems | CCIT operates an Internet2 Access Grid Node. Arizona Telemedicine makes extensive use of videoconferencing supported by Biomedical Communications. KUAT Multimedia Services and UA South operate videoconferencing sites for general use including distance learning. | Centralized planning for deployment and widespread use of videoconferencing services is included in the NMP. However, at present, there are no plans to unify the various units providing these services, and there is no known business case (based, e.g., on cost savings) for doing so. | Video has been identified as one of 14 project themes within the Network Master Plan; core members of the project group have been named from CCIT and Learning Technologies. |
| Voice over IP (VoIP) | VoIP pilots, managed by CCIT's Network Technology Solutions division, are underway | The NMP outlines a transition over 10 years to VoIP, with gradual decline in use of 5ESS telephone switch. It is expected that responsibility for VoIP will remain completely centralized. | VoIP has been identified as one of 14 project themes within the Network Master Plan, and substantive progress is being made. VoIP pilots have been completed and some conventional phones have been replaced by VoIP equipment. New buildings are being outfitted for VoIP. |

**Data Warehouse & Query Environment**

*Summary: Business data should be available from an authoritative central source such as an institutional data warehouse. UA has had such a warehouse for 15 years and plans to continue extending its coverage of business data and its ability to support analysis. An in-depth study by the Focused Excellence Study Team on Data, Analysis, and Planning (DAP) is documented at http://www.iwo.arizona.edu/study/StudyTeamReport.pdf. Partly in response to this study, warehouse functions have been centralized within CCIT.*

| Specific Function | Current (April 2005) Situation | Plans for Centralization | Progress Toward Centralization |
|---|---|---|---|
| Institutional datasets | UIS (University Information System) is maintained by CCIT as operational data store; IIW (Integrated Information Warehouse) is maintained by a Warehouse Office reporting directly to CIO. Some important data sources are unavailable in either UIS or IIW, and usefulness is limited by lack of metadata. | 1. UA plans to merge its two data warehouse units.<br>2. UA plans to implement the recommendations of the DAP Study, a subset of which are relevant to centralization: identifying data sources that should be made centrally available through UIS and/or IIW; creation of new procedures for data capture; and improvement of metadata for all centrally maintained data. | 1. Done: http://www.iwo.arizona.edu.<br>2. Additional data sources have been identified. Data required for calculation of Net Tuition Revenue have been defined, and capture methods have been developed. The Metadata Pilot Project is almost complete: Business definitions and subtext areas have been defined for the human resources applications, and the metadata repository tool (Info Librarian) is fully functional. |
| Data access policy | Access to data in UIS is derivative from policy governing each individual business system. | DAP Study Team recommended bringing information access policy up to date. | A new access policy is available in draft: http://ccitdata.web.arizona.edu/policy.html. |
| Analysis and reporting | Certain standard queries and reports are maintained by the Warehouse Office, but most analysis is left to the responsibility of individual units, in support of unit-level planning and decision-making. | DAP Study Team did not recommend centralization of this function but presented a case for *decentralized analysis and reporting unified by centralized warehouse*. CCIT plans to acquire and centrally manage the software tools needed for this. | New resources have been added to the Information Warehouse website, including clear specification of the limits of IWO responsibility. Details can be found at http://www.iwo.arizona.edu/reports/. |

**Institution-wide Software Applications & Utilities**

*Summary:Institutional applications are centrally supported within two CIO units. CCIT's Administrative Computing group supports most major university business systems (http://computing.arizona.edu/services/admin.shtml) and the Learning Technologies Center supports most university-wide instructional support tools (http://www.ltc.arizona.edu/instsupport.htm). Software systems that serve functions specific to individual offices (e.g., Parking and Transportation) may be administered locally. Systems replacement responsibility is centralized with the CIO.*

| Specific Function | Current (April 2005) Situation | Plans for Centralization | Progress Toward Centralization |
|---|---|---|---|
| Human Resources | PSOS is centrally managed by CCIT; this 25+-year-old system needs replacement. | UA plans to replace this system when resources are available. Any new system will also be centrally managed by CCIT. Immediate plans include the mapping of current PSOS data into a relational model as a first step in system enhancement. | A complete process flow analysis has been done to document critical HR processes to support system improvements. |
| Student Services | Student systems are in transition (from SIS to Matrix/hybrid), but centrally controlled by CCIT. | UA plans to complete the transition from legacy SIS to a hybrid of Matrix components with new-technology extensions of legacy components. The systems will remain centrally controlled by CCIT. | A proof of concept for the hybrid solution has been completed, demonstrating that a hybrid solution is feasible. |
| Financial Services | FRS is centrally managed by CCIT. | UA plans to evaluate the possibility of replacing FRS with an up-to-date financial system. Any new system will also be centrally managed by CCIT. | UA has joined a consortium (Kuali) to share development of financial software, and is currently evaluating whether to replace FRS with the Kuali Financial System. |
| Grants Management | SPINS is managed jointly by CCIT and Sponsored Projects. | UA plans to replace SPINS with an up-to-date grants management system. | UA is evaluating possible replacements for SPINS. |

| | | | |
|---|---|---|---|
| Course Management System (CMS) | Course management tools and related faculty support services are provided by the Learning Technologies Center (LTC). LTC maintains D2L as its primary CMS but also supports a variety of experimental, developmental, and specialty tools. One College (Eller) supports and uses Blackboard. | UA plans to develop a unified support framework that is as sensitive as possible to differences among disciplines and as receptive as possible to innovation. UA does not plan to standardize on any particular CMS product. | D2L now supports most online courses at UA, but alternatives such as Polis, OldPuebloMOO, and OLE serve significant numbers with specialized functions tuned to disciplinary needs. UA continues to participate actively in the development of Sakai and other promising instructional tools. |
| Electronic Portfolio System | OSP (Open Source Portfolio) is centrally managed by LTC. | UA plans to extend the use of ePortfolios for classroom and administrative use, including program evaluation, teaching portfolios, and promotion review. | LTC is currently exploring applications of OSP for classroom use with pre-service science teachers and for administrative use with a focus on student outcomes assessment and program evaluation. |
| Web Seminar Conferencing System | UA has a centrally supported conferencing system (Macromedia Breeze) managed by the LTC. | UA plans to continue offering this service, expanding as use grows. | UA currently has the ability to support 200 simultaneous users. There are 500 registered users of the system and over 240 meetings scheduled. |
| Email | CCIT maintains a central email service and a database for employee email addresses. A declining number of departments and business units operate their own email servers. | UA plans to consolidate as many email services as possible by improving the central service and persuading as many departments as possible to transition onto the central service. | Since April 2005, the following departments have voluntarily suspended their local email services and now use the central service:<br>▪ Information Warehouse Office<br>▪ Office of General Counsel<br>The following colleges are in the process of suspending their local email services and transitioning to the central service:<br>▪ Eller College of Management<br>▪ Zuckerman College of Public Health |

| | | | |
|---|---|---|---|
| Portal | UA has portal-like applications for students (StudentLink) and for employees (EmployeeLink). A decision was made several years ago that any UA portal would be centrally supported and centrally governed. | UA plans to implement a university-wide portal when resources permit. | An experimental instance of uPortal is running in the LTC to support Sakai development and another instance is running in FSO to support Kuali development. |
| Institutional Repositories | UA has a centrally-supported institutional repository for learning objects, DLearn (based on MIT's DSpace), managed jointly by LTC and the Library | UA plans to develop an institutional repository for research data when resources can be identified. | No resources have been identified for this function. |
| Middleware | CCIT maintains a central authentication service (NetID) which includes a web-based single sign-on system (WebAuth, based on CAS). | UA plans to investigate centralized identity management, multi-factor and PKI authentication technologies, authorization and workflow services. | Many applications and services (central and departmental) have incorporated the NetID and WebAuth service for authentication. |
| Calendaring | CCIT maintains a central calendaring system, Meeting Maker, but many other systems (including other instances of Meeting Maker) are supported elsewhere. | Since the value of a calendaring system is linked to the pervasiveness of its use, UA plans to centralize calendaring when resources can be identified. | No resources have been identified for this function. |
| Virus Protection | Virus protection is available centrally and at no charge from CCIT. | UA plans to continue offering virus protection and update services for the whole campus. | No changes are needed at present. |

**Information Security (IS)**

*Summary: Individuals throughout the organization must take responsibility for Information Security, but central leadership is essential. CCIT provides this leadership at UA, under the direction of the University Information Security Officer, who also reports directly to the President. Details, including annual status and progress reports, may be found at http://security.arizona.edu*

| Specific Function | Current (April 2005) Situation | Plans for Centralization | Progress Toward Centralization |
|---|---|---|---|
| IS Awareness | Network and information security depend on choices at many levels beyond the central level. CCIT takes responsibility for providing expert advice, guidelines, and tools. For more detail, follow the "awareness" link on the website. | UA plans to continue education of campus community through a Security Awareness Campaign, which emphasizes the need for pervasive behavior change at all levels. | For full details, see 2005 report to the President on the website. Major achievements in this area include (1) the development of a template response to Purchasing Card Industry compliance as a guideline for other departments handling credit card transactions and (2) expansion of the awareness workshops to local high schools and national conference events. |
| IS Policy | The University Information Security Office is responsible for the development and maintenance of information security related policies. | UA plans to adopt an institutional security policy. | A policy has been drafted and is currently in process for formal adoption. |
| IS Program | CCIT has direct responsibility for certain security areas such as network security (see http://www.sirt.arizona.edu). CCIT also supports departmental network managers in designing and implementing security measures to the desktop. | UA plans to implement an automated detection and registration program for the Residence Halls; to identify and implement more proactive intrusion detection mechanisms; and to develop centralized security strategy as explicit components of the Network Master Plan and the data warehousing strategy. | Cisco SPA results were distributed to all Network Managers for remedial action. Access tools are currently being tested in two residence hall facilities. CCIT implemented auto blocking of infected machines and deployed an on-campus Intrusion Detection Service (IDS) and real-time network awareness sensors for more proactive monitoring of network compromises. |

| **Business Continuity and Disaster Recovery**<br><br>*Summary: Centralized responsibility for business continuity and disaster recovery is shared among three Vice Presidential areas (Business Affairs, Campus Life, and Learning & Information Technologies). CCIT has responsibility for the IT components.* | | | |
|---|---|---|---|
| **Specific Function** | **Current (April 2005) Situation** | **Plans for Centralization** | **Progress Toward Centralization** |
| Business Continuity Planning | CCIT maintains the university's business continuity software. | UA plans to continue developing and promoting tools and methods for business continuity planning. | CCIT has created a well-developed website with tools for business continuity planning and disaster recovery: http://disasterrecovery.arizona.edu/. |
| Backup/Recovery | CCIT maintains the university's remote disaster recovery site and backup/recovery for critical business and academic systems. | UA's central IT units intend to participate actively in campus-level emergency and recovery-related initiatives, including the Campus Emergency Response Team. | Completion of an important study of backup services led to a recommendation that a comprehensive plan for central data backup be developed and implemented. CCIT has begun offering data backup as a contract service and has a small number of clients. |

**Technical Support and Services**

*Summary: UA has a "layered" support model intended to ensure consistency in shared services while allowing enough flexibility to meet the needs of highly variable working environments. Core technical services are provided centrally at no charge, and departments may choose whether to provide their own services to end-users or to purchase these services from CCIT and/or Learning Technologies. While small units are typically best served by purchasing services from a central support unit, large units can achieve greater responsiveness at the same cost, or even less, by providing some of their own support. Consolidation of support at the College level is common. Responsibility for the coordination of central and departmental support layers is shared by the CIO and campus constituent groups such as Netmanagers (http://www.netmgrs.arizona.edu) and Deans' Information Technology Council (http://www.ditc.arizona.edu).*

| Specific Function | Current (April 2005) Situation | Plans for Centralization | Progress Toward Centralization |
|---|---|---|---|
| Desktop Support | Colleges, departments, and business units are responsible for choosing and funding their own desktop support and server management. This can be done by hiring technical support within the unit or by paying CCIT for services. | CCIT plans to develop and market an attractive "contract" service for desktop support, targeting small units for whom cost savings can be substantial. | Done: Clients include most Vice Presidential offices, with the largest contracts covering Career Services, Sponsored Projects, Office of the General Counsel, the Provost's Office, and the Dean of Students. The same services are now being marketed to Colleges. |
| Server Operations | CCIT has 2 data centers (CC Building and USA Building), but many departments maintain servers in their own space. | UA plans to create centrally-managed facilities for hosting departmental servers and sharing operations staff; this could yield savings of both dollars and space. | A new academic data center has been opened in the Integrated Learning Center, operated by OSCR, and potentially open to departments needing hosting. CCIT has developed an attractive subscription rate for server hosting and is working in close coordination with OSCR. |
| Staff and Faculty Help Desk Services | CCIT and several other technical organizations (such as the Enrollment Management Support Group and the Library) provide help desk services. | UA plans to unify its help desk services by improving communication about roles and responsibilities and by improving customer service skills. | Diverse help desks within CCIT have been consolidated under new management, and continuous efforts are being made to improve alignment with other help desks. Help desk service models at other universities are being studied. |

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| Common Software Licensing | CCIT handles campuswide site licenses when appropriate. Reduced cost software purchasing is supported by the Student Union Bookstore (not a CIO unit, but closely partnered with CCIT). | UA plans to continue providing enterprise-wide licenses where appropriate, to take advantage of special licensing, and to continue seeking ways to reduce purchasing costs to individuals and departments. | OSCR has begun providing access to high-end and specialty software through a central key server, which reduces the total number of licenses needed for any given application. OSCR serves licenses both to its own labs and to departmental labs. |
| IT Planning and Assessment | Varying IT resources and support functions are distributed throughout campus units. CCIT often works with units, formally and informally, to help resolve any issues that may arise and/or provide expert guidance on best practices and directions. | CCIT plans to develop a consistent process and method for the assessment of departmental technology environments and to offer this service to departments at a very low cost. | Done: CCIT has initiated a formalized technology assessment methodology in response to recent requests from departments for guidance on internal IT issues. Assessments have been completed for the Student Union and the College of Architecture & Landscape Architecture, and a standard assessment template is now available. |
| Classroom IT Support | Classroom IT support is provided centrally (but not in a CIO unit) by the University Teaching Center (UTC), which collaborates closely with the two learning technology units (OSCR and LTC). | There are no plans at present to shift this function to the CIO. UA plans to restart the classroom renovations project, especially if Building Renewal funds are made available, and if this happens, CIO units will be deeply involved in the process. | UTC (and therefore classroom support) was very recently transferred *from* the CIO *to* the Vice Provost for Academic Affairs, in order to consolidate faculty-related functions under the VPAA. This function is now fully centralized within the Provost's office. |

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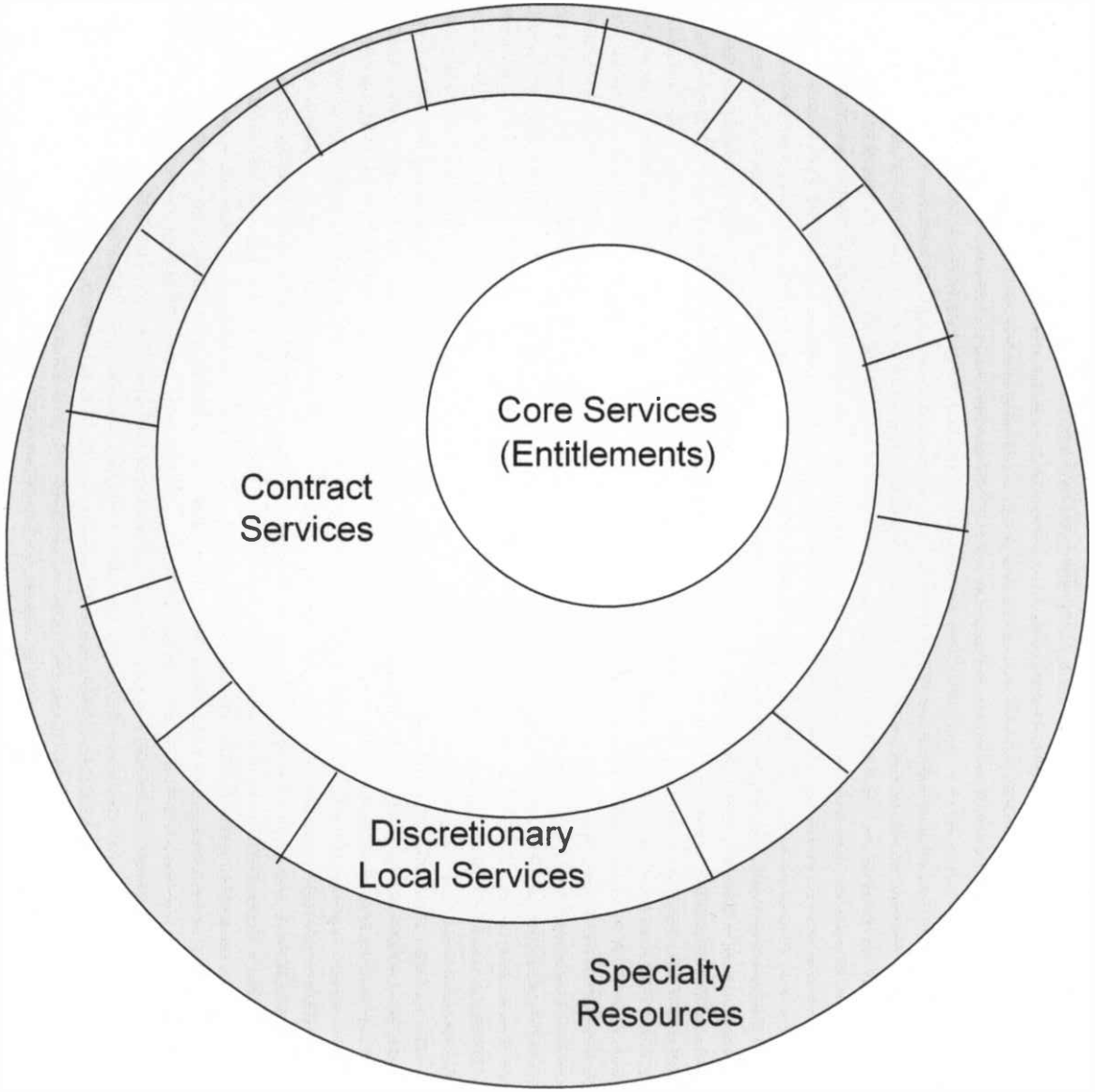
| Student Computer Labs | At UA, student computer labs are managed both centrally (by OSCR) and departmentally throughout the campus. OSCR's centrally-supported labs are open to all students and departments. Individual departments operate their own special-purpose labs, often with the technical and financial assistance of OSCR. | UA plans to develop a campus-wide overview of student computing labs, to refine the business model of the Refresh Bank to better serve all students, and to expand the availability of its key server for better software asset management. | A workgroup has been formed to study the relationships between centrally supported (general purpose) labs and departmentally managed (special purpose) labs. |
| Student IT Helpdesk | Student help desk services are provided centrally by OSCR at many locations across campus; the Library's help desk also gets IT-related requests and handles many of them directly, referring others to OSCR. | OCSR plans to continue expanding its locations and improving its help desk service model. | OSCR opened a new help desk in the Integrated Learning Center and has created a Mobile Help Desk service for the Residence Halls. OSCR, CCIT, and Residence Life collaborated in creating a successful "opening of school" program for students. |

# How We Invest in Information Technology




## Our Current Profile

### Example Entitlements

- 24 X 7 network access
- Network security
- Email & NetID
- Business data
- Software applications
- Self-service transactions
- Consulting

### Typical Contract Services

- Desktop tech support
- Calendaring
- Phone service (land line)
- Web hosting

### Typical Discretionary Services

- Desktop tech support
- Calendaring
- Phone service (cellular)
- Web hosting
- Email

### Typical Specialty Resources

- Computerized lab instruments
- Beowulf cluster
- Experimental network gear
- 3D visualization environment