All ASME (American Society of Mechanical Engineers) journals (15 titles)

including: Journal of Computing and Information Science

Wiley journals in print and online:

Journal of Visualization and Computer Animation

International Journal of Intelligent Systems

Software: Practive and Experience

selected Springer journals in print and online:

Algorithmica

Applied Signal Processing

Computing

Computing and Visualization in Science

Discrete and Computational Geometry

Machine Vision and Applications

Neural Computing and Applications

Pattern Analysis and Applications

Soft Computing

Visual Computer

selected Elsevier journals -- some in print, all online back to 1995:

Knowledge-Based Systems

Computer-Aided Geometric Design

Computers in Human Behavior

Design Studies

Fuzzy Sets and Systems

Artificial Intelligence

Computers and Graphics

Image and Vision Computing

Neurocomputing

Pattern Recognition Letters

Signal Processing

Signal Processing: Image Communication

Speech Communication

Computational Geometry

Information Processing Letters

Mathematical and Computer Modelling

Mathematics and Computers in Simulation

Future Generation Computer Systems

other publishers:

AIAA Magazine

Advances in Computers

International Journal of Parallel Programming

Journal of Object-Oriented Programming

Real-Time Systems

SIAM Journal on Computing

C. Describe briefly the anticipated delivery system for the proposed program as it may relate to resources e.g., traditional delivery on main campus; traditional delivery at branches or centers; or nontraditional instruction such as instructional technology (distance learning), self-paced instruction, and external degrees. Include an assessment of the potential for delivery of the proposed program through collaboration with other universities, both public and private. Cite specific queries made of other institutions with respect to the feasibility of shared courses utilizing distance learning technologies, and joint-use facilities for research or internships.

This program will use traditional delivery on the main campus and we do not anticipate collaboration with other universities in offering this program.

V. Assessment of Current and Anticipated Faculty

- A. Use DCU Table One to provide information about each existing faculty member who is expected to participate in the proposed program by the fifth year. Append to the table the number of master's theses directed, number of doctoral dissertations directed, and the number and type of professional publications for each faculty member.
- B. Also, use DCU Table One to indicate whether additional faculty will be needed to initiate the program, their faculty code (i.e., A, B, C, D, or E as detailed in the lower portion of Table One), their areas of specialization, their proposed ranks, and when they would be hired. Provide in narrative the rationale for this plan; if there is no need for additional faculty, explain.

There is no need for new faculty specifically for this program as it will share courses with existing programs. While increasing the number of faculty in order to strengthen our research program and reduce the student/faculty ratio, is always desirable, no specific plans are in place to do so and it is unnecessary for the viability of this program.

C. Use DCU Table One to estimate each existing and additional faculty member's workload (in percent person-years) that would be devoted to the proposed program by the fifth year of implementation, assuming that the program is approved. (Note: this total will carry over to DCU Table Four's fifth year summary of faculty positions.)

VI. Assessment of Current and Anticipated Resources

- A. In narrative form, assess current facilities and resources available for the proposed program in the following categories:
 - 1. Library volumes (Provide the total number of volumes available in this discipline and related fields.)

The list below describes the book holdings of the Marston Science Library print books that will directly support the Computer Science program

Following are the approximate number of print titles within specified call number ranges. Some of these titles include several volumes of conference

proceedings, continuing series, etc.

800 titles: Q295-Q387 Cybernetics and Artificial Intelligence

7000 titles: QA75-QA99 Computer Science

300 titles: QA267-QA268 Automata and theoretical computer science

475 titles: QA402-QA405 Control Theory

420 titles: T342-T385 Engineering and Computer Graphics

200 titles: TA174-TA175 Engineering- and Computer-aided Design

200 titles: TA340-TA345 Models, Simulation, Computer-Aided Engineering

875 titles: TA1500-TA1800 Photonics, Optics, Lasers, Computer Vision

750 titles: TJ200-TJ240 Robotics and Control Systems 3200 titles: TK7800-TK7999 Computer Engineering

= approximately 14,220 print titles

In addition to the above, the Libraries license online books through 2 major services: NetLibrary and Books24x7.

NetLibrary: approx. 2800 titles in computer/engineering applications

Books24x7 approx 3600 titles in computer/IT applications

Total print + online books = (14,220 + 2800 + 3600) = 20,620

2. Serials (Provide the total number available in this discipline and related fields, and list those major journals which are available at your institution.)

The University of Florida Libraries subscribe to more than 5000 print and over 30,000 electronic serials.

IEE/IEE:

- * IEEE (Institute of Electrical & Electronics Engineers) Electronic Library (IEL) -- online full text of more than 120 journals and more than 600 conference proceedings from IEEE and IEE from 1988+ (total collection of over 1,000,000 articles in over 12,000 publications)
- * All IEEE (ASPP) journals in print (approx 130 titles)
- * Selected IEEE conferences (POP) from 1985+ in print (approx 130/year) including titles such as:

Proceedings, IEEE Virtual Reality

IEEE Conference on Visualization

* All IEE (Institution of Electrical Engineers) journals in print (13 titles)

including: IEE proceedings. E, Computers and digital techniques.

ACM:

- * All ACM (Association for Computing Machinery) journals in print and selected conference proceedings (approx 30 titles)
- * ACM Digital Library and Computing Reviews online

for a minimum of approximately 250 research journal titles in directly-relevant areas plus proceedings from over 800 conferences.

3. Describe classroom, teaching laboratory, research laboratory, office, and any other type of space, which is necessary and currently available for the proposed program

This program will not need additional space beyond that currently available for existing degree programs offered by CISE. While space shortage was identified in the latest ABET accreditation report for the Computer Engineering program, as described above, steps have been taken to alleviate the problem in the future.

4. Equipment, focusing primarily on instructional and research requirements

The Computer and Information Science and Engineering department has the following departmental computing resources to support teaching and research:

- o 2 Network Appliance filers, each with 1 TB of raw disk space provide the bulk of the disk storage.
- Approximately 35 servers providing services including web, email, database (oracle and postgres), Kerberos authentication, DNS, NIS, DHCP, backups, samba, NFS, dialup, and security related services.
- o 6 publicly available CPU servers. They range from 2GB to 8GB of memory, and 300 MHz to 1 GHz ultra sparc processors.
- o Approximately 120 suns (Solaris), 175 PCs running windows variants (Windows 2000 and Windows XP primarily), and 55 PCs running linux (Mandrake) serving as lab machines and desktops for students, TAs, RAs, and faculty members. Of these, 24 suns, 52 windows PCs, and 45 linux PCs are in public labs that are available for general student use, computer lab use for classes, etc.
- O The networking in the department consists of a Cisco Catalyst 6513 which provides routing and switch capabilities to more than 600 machines and 80 networks in the department. The entire network consists of fiber optics to the entire department except for the machine room which is connected to the Cisco with Gb rated UTP. All networks run at 100 Mb except for the servers which use high bandwidth which run at 1 Gb.
- o The network connection to the world is a 100 Mb fiber connection to the University of Florida core network.
- O A wireless network that covers the entire CSE building is in place for faculty and students who have wireless notebooks and other devices.
- o Additional equipment belonging to individual research groups.
- 5. Fellowships, scholarships, and graduate assistantships (List the number and amount allocated to the academic unit in question for the past year.)

Undergraduate scholarships: 20 (\$1000)

Graduate fellowships: 4 (\$17,000 stipend + tuition) Graduate assistantships: 30 (\$16,000 stipend + tuition)

6. Internship sites if appropriate

Lockheed Martin

Microsoft

Harris

Raytheon

Intel

Gleim Publications

IBM

US Biomedical Info Systems

Velara

Regeneration Technologies

U.S. Air Force

Motorola

Federal Government

Cox Cable

B. Describe additional facilities and resources required for the initiation of the proposed program (e.g., library volumes, serials, space, assistantships, specialized equipment, other expenses, OPS time, etc.). If a new capital expenditure for instructional or research space is required, indicate where this item appears on the university's capital outlay priority list. The provision of new resources will need to be reflected in the budget table (DCU Table Four), and the source of funding indicated. DCU Table Four only includes I&R costs. If non-I&R costs, such as indirect costs affecting libraries and student services, are expected to increase as a result of the program, describe and estimate those expenses in narrative form. It is expected that high enrollment programs in particular would necessitate increased costs in non- I&R activities.

No additional resources are required.

ACCOUNTABILITY

VII. Assessment of Need and Demand

A. What national, state, or local data support the need for more people to be prepared in this program at this level? (This may include national, state, or local plans or reports that support the need for this program; demand for the proposed program which has emanated from a perceived need by agencies or industries in your service area; and summaries of prospective student inquiries.) Indicate potential employment options for graduates for the program. If similar programs (either private of public) exist in the state, provide data that support the need for an additional program. Summarize the outcome of communication with such programs.

The College of Engineering currently lacks a BS in Computer Science. Students currently

choose from a BS in Computer Engineering, a BS in Computer Science through the College of Liberal Arts and Sciences, and a BS in Computer and Information Science through the College of Business. Although graduates of our existing degree programs are highly regarded by those employers who are familiar with them, feedback from the CISE Industrial Advisory Board tells us that offering a standard BS in Computer Science through the College of Engineering may make it easier for some companies to effectively recruit at UF.

The CISE Department's Student Services Center receives frequent inquiries from students who would like to pursue a Computer Science program through the College of Engineering. The inquiries are typically centered on the student's desire to become a software engineer without being required to complete Electrical Engineering courses. These students want to engineer new software, and they do not want a job in which they need to have knowledge of the hardware aspects taught in the Electrical Engineering courses. Other inquiries stem from prospective students who in researching Computer Science degrees at other institutions found most of those degrees were from Engineering colleges, and they question why our Computer Science program is a Liberal Arts degree.

B. Use the appropriate DCU Table Three (A for Baccalaureate, B for Graduate) to indicate the number of students (headcount and FTE) you expect to major in the proposed program during each of the first five years of implementation, categorizing them according to their primary sources. In the narrative following Table Three, the rationale for enrollment projections should be provided and the estimated headcount to FTE ratio explained. If, initially, students within the institution are expected to change majors to enroll in the proposed program, describe the shifts from disciplines, which will likely occur.

We expect that, initially, one-third of our Computer Engineering majors will change to this new major to be able to replace hardware courses with courses in a different area. We also expect a much smaller shift from the current Liberal Arts Computer Science major.

C. For all programs, indicate what steps will be taken to achieve a diverse student body in this program. Please create a place for signature at the end of section (VII)(C) and have your university's Equal Opportunity officer read, sign, and date this section of the proposal.

It is a goal of the CISE department and the entire College of Engineering to increase diversity in all of our programs. The new degree program will benefit from these efforts. Because of the interdisciplinary component of the proposed program, it has the potential to attract a more diverse student body, particularly women, than the existing Computer Engineering program.

VIII. Budget

A. Assuming no special appropriation for initiation of the program, how would resources within the institution be shifted to support the new program?

This degree program can be implemented using currently existing courses. Future fine-tuning of

the program may include a new communications course specialized for the students in this program (which would also be appropriate, although not currently required, in the other computing degrees.) In addition, we anticipate that, in the future, new minors and technical elective courses will be introduced to facilitate interdisciplinary study in emerging areas. These would take advantage of the flexibility of our program and provide additional options for students, but are not required to implement the program initially or maintain its viability.

We expect most of the students in this program to be students who otherwise would take the alternate degree programs in the department. Students choosing this program instead of Computer Engineering would reduce the number of students in the ECE courses required in that program, and instead take courses in a variety of other areas. Students choosing this program instead of CLAS-CS would not need a foreign language. Enrollment will increase in upper division CISE courses.

- B. Use DCU Table Four to display dollar estimates of both current and new resources for the proposed program for the first and the fifth years of the program. In narrative form, identify the source of both current and any new resources to be devoted to the proposed program. If other programs will be negatively impacted by a reallocation of resources for the proposed program, identify the program and provide a justification.
- C. Describe what steps have been taken to obtain information regarding resources available outside the institution (businesses, industrial organizations, governmental entities, etc.). Delineate the external resources that appear to be available to support the proposed program.

The CISE department offers several degree programs and solicits support from industry to support our teaching and research efforts. Any such support would tend to benefit all of our programs.

D. For graduate level programs, specifically address the potential negative impacts that implementation of the proposed program will have on related undergraduate programs (i.e., shift in faculty effort, reallocation of instructional resources, reduced enrollment rates, greater use of adjunct faculty and teaching assistants) and explain what steps will be taken to mitigate any such impacts. Also discuss the potential positive impacts that the proposed program might have on related undergraduate programs (i.e., increased undergraduate research opportunities, improved quality of instruction associated with cutting edge research, improved labs and library resources).

Not applicable

E. Describe any other projected impacts on related programs, such as required courses in other departments.

Students choosing this program instead of Computer Engineering would reduce the number of students in the ECE courses required in that program, and instead take courses in a variety of other areas. Students choosing this program instead of CLAS-CS would not need a foreign

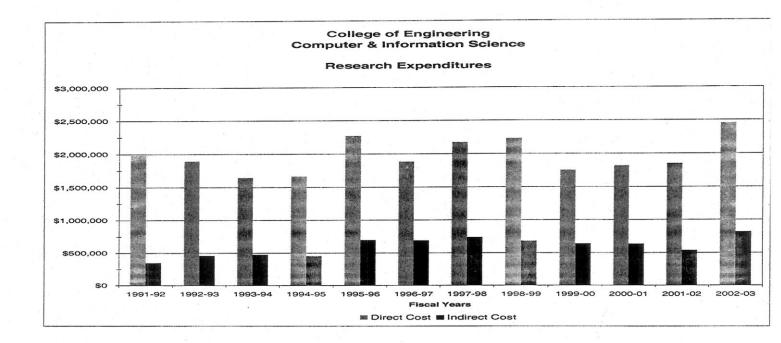
language.

IX. Productivity

Provide evidence that the academic unit(s) associated with this new degree have been productive in teaching, research, and service. Such evidence may include trends over time for average course load, FTE productivity, student headcounts in major or service courses, degrees granted, external funding attracted; as well as qualitative indicators of excellence.

The CISE department as of fall 2004 comprises 36 tenure track, 11 non-tenure track, and 2 visiting faculty. The faculty have been the recipients of many honors and awards including four IEEE Fellows, ACM, AAAS, SPIE, and SCS fellows, two Members of the European Academy of Sciences, IEEE Taylor Booth Award, IEEE Wallace McDowell Award, ACM Karl Karlstrom Award, many keynotes and best paper/poster awards, two NSF CAREER Awards in 2004, and two Fulbright scholars.

The department has the largest undergraduate enrollment of any department in the College of Engineering. The chart on the next page shows significant and sustained research expenditures.



STATION 1
UNIVERSITY OF FLORIDA

X. Access - Bachelor's Degrees Only

A. If the total number of credit hours to earn a degree exceeds 120, provide a justification for an exception to the policy of a 120 maximum.

The program will be 126 credits for a BS degree. This will allow students to obtain both sufficient depth and breadth in their education. This is also the same number of credits as our computer engineering degree.

B. List any program prerequisites, and provide assurance that they are the same as the standardized prerequisites for other such degree programs within the SUS. If they are not, provide a rationale for a request for exception to the policy of standardized prerequisites. NOTE: Typically, all lower division course requirements required for admission into the major will be considered prerequisites. The curriculum can require lower division courses that are not prerequisites for admission into the major, as long as those courses are built into the curriculum for the upper level 60 credit hours.

All prerequisites to the program are standardized prerequisites for other such degree programs within the SUS.

Analytic Geometry & Calculus 1
Analytic Geometry & Calculus 2
Analytic Geometry & Calculus 3
Elementary Differential Equations
Physics w/Cal 1
Lab for PHY 2048
Physics w/Cal 2
Lab for PHY 2049
General Chemistry
Lab for CHM 2045

C. If the university intends to seek formal Limited Access status for the proposed program provide a rationale that includes an analysis of diversity issues with respect to such a designation. Explain how the university will ensure that community college transfer students are not disadvantaged by the limited access status. NOTE: The policy and criteria for limited access are identified in Rule 6C-6.001 (11) (e) and (f).

Limited access status is not being sought for this program

D. Provide evidence that community college articulation has been addressed and ensured, especially with those community colleges that are direct feeder schools.

The prerequisites to transfer from a community college are the same as that for the rest of the College.

E. If the proposed program is an AS to BS capstone, ensure that it adheres to the guidelines approved by the ACC for such programs, as set forth in Rule 6A-10.024. List the prerequisites if any, including the specific AS degrees which may transfer into the program.

The proposed program is not an AS to BS capstone.

STATION 1 ORIDA

DCU TABLE ONE FACULTY PARTICIPATION IN PROPOSED DEGREE PROGRAM BY FIFTH YEAR

All faculty will potentially participate in the new degree program from its initiation. Given workload is the faculty time assigned to teaching responsibilities overall as it is not reasonable to attempt to allocate faculty time between our degree programs.

				(For Existin		Initial Date	5 th Year Workload
Faculty CODE	Faculty Name or "New Hire"	Academic Discipline/Specialty	Rank	Contract Status (Tenure status or equivalent)	Highes t Degre e Held	for Partici pation in Propo sed Progr am	in Proposed Program (Portion of Person- year)
	Banerjee, Arunava	Intelligent Systems & Computer Vision	Asst. Professor	Tenure Track	PhD		58
	Bermudez, Manuel	Computer Systems	Assoc. Professor	Tenured	PhD		50
	Chen, Shigang	Computer Systems	Asst. Professor	Tenure Track	PhD		55
	Chen, Su-Shing	Database and Information Systems	Professor	Tenure Track	PhD		55
	Chow, Randy	Computer Systems	Professor	Tenured	PhD		75.5
	Cubert, Robert	Software Engineering, object- oriented methods, algorithms	Sr. Lecturer	Non Tenure	PhD		100
	Dankel, Douglas	Intelligent Systems & Computer Vision	Asst. Professor	Tenured	PhD		50
	Davis, Timothy	High-Performance Computing/Applied Algorithms	Assoc. Professor	Tenured	PhD		65
	De Simone, Rory	Computer Reading, Internet, animation and graphics.	Lecturer	Non Tenure	M.S.		100
	Dobbins, Peter	Digital mediea, object-oriented programming, artificial intelligence	Lecturer	Non Tenure	M.S.		100
	Dobra, Alin	Computer Systems	Asst.	Tenure	PhD		58

		Professor	Track		
Fishwick, Paul	Computer Graphics, Modeling, & Art	Professor	Tenured	PhD	47
Fu, LiMin	Intelligent Systems & Computer Vision	Professor	Tenured	PhD	15
Gader, Paul	Intelligent Systems & Computer Vision	Professor	Tenured	PhD	52.5
Hammer, Joachim	Database and Information Systems	Assoc. Professor	Tenured	PhD	65
Haskins, Gerald	Computer-related legal issues, software systems design	Sr. Lecturer	Non Tenure	J.D.	100
Haskins, Lola	Undergraduate Advisement for CIS students in LAS	Lecturer	Non Tenure	B.S.	100
Helal, Abdelsalam	Database and Information Systems	Professor	Tenured	PhD	33
Ho, Jeffrey New Hire	Intelligent Systems & Computer Vision	Asst. Professor	Tenure Track	PhD	50
Jermaine, Christopher	Database and Information Systems	Asst. Professor	Tenure Track	PhD	50
Kahvechi, Tamer New Hire	Database and Information Systems	Asst. Professor	Tenure Track	PhD	50
Liu, Jonathan	Computer Systems	Assoc. Professor	Tenured	PhD	50
Lok, Benjamin	Computer Graphics, Modeling, & Art	Asst. Professor	Tenure Track	PhD	57
Mishra, Prabhat New Hire	Computer Systems	Asst. Professor	Tenure Track	PhD	50
Newman, Richard	Computer Systems	Asst. Professor	Tenured	PhD	77
Peir, Jih-Kwon	Computer Systems	Assoc. Professor	Tenured	PhD	37.5
Peters, Jorg	Computer Graphics, Modeling, & Art	Assoc. Professor	Tenured	PhD	37
Rangarajan, Anand	Intelligent Systems & Computer Vision	Assoc. Professor	Tenured	PhD	70
Ranka, Sanjay	High-Performance Computing/Applied Algorithms	Professor	Tenured	PhD	57
					29

	Ritter, Gerhard	Intelligent Systems & Computer Vision	Professor	Tenured	PhD	
	Sahni, Sartaj	High-Performance Computing/Applied Algorithms	Distinguished Professor & Chair	Tenured	PhD	25
	Sanders, Beverly	Computer Systems	Assoc. Professor	Tenured	PhD	50
	Schmalz, Mark	Computer Vision, Optics, Image Processing, Cryptography	Sr. Scientist	Non Tenure	PhD	58
	Schneider, Markus	Database and Information Systems	Asst. Professor	Tenure Track	PhD	50
	Sitharam, Meera	High-Performance Computing/Applied Algorithms	Assoc. Professor	Tenured	PhD	55
8	Small, Dave	Object-oriented design, computer graphics, artificial intelligence, and web technologies	Lecturer	Non Tenure	M.S.	100
	Su, Stanley	Database and Information Systems	Distinguishe d Professor	Tenured	PhD	46
	Thebaut, Stephen	High-Performance Computing/Applied Algorithms	Asst. Professor & Assoc. Chair	Tenured	PhD	37
	Ungor, Alper New Hire	High-Performance Computing/Applied Algorithms	Asst. Professor	Tenure Track	PhD	50
	Vemuri, Baba	Intelligent Systems & Computer Vision	Professor	Tenured	PhD	30
	Wilson, Joseph	Intelligent Systems & Computer Vision	Asst. Professor	Tenured	PhD	51
	Xia, Ye	Computer Systems	Asst. Professor	Tenure Track	PhD	58
	Yavuz-Kahvechi, Tuba New Hire	Computer Systems	Lecturer	Non Tenure	PhD	100

Faculty CODE	Corresponding Faculty Position Category in TABLE 3 for the Fifth Year	Proposed Source of Funding for Faculty	TOTAL 5 th Year Workload by Budget Classification
A	Current General Revenue	Existing Faculty – Regular Line	
В	Current General Revenue	New Faculty – To be Hired on Existing Vacant Line	
С	New General Revenue	New Faculty – To be Hired on a New Line	
D	Contracts and Grants	Existing Faculty – Funded on Contracts and Grants	
E	Contracts and Grants	New Faculty – To Be Hired on Contracts and Grants	
		Overall Total for 5 th Year	

DCU TABLE THREE-A NUMBER OF ANTICIPATED MAJORS FROM POTENTIAL SOURCES*

BACCALAUREATE DEGREE PROGRAM

ACADEMIC YEAR	YE	AR1	YEA	AR 2	YE	AR3	YEA	R4	YEA	R 5
Source of Students (Non-Duplicated Count in Any Given Year)*	НС	FTE	НС	FTE	нс	FTE	нс	FT E	НС	FTE
Upper-level students who are transferring from other majors within the university***	200		45		50		50		50	
Students who initially entered the university as FTIC students and who are progressing from the lower to the upper level**	40		40		75		75		75	
Florida community college transfers to the upper level**	5		10		35		35		45	
Transfers to the upper level from other Florida colleges and universities**	3		3		3		3		3	
Transfers from out of state colleges and universities**	2		2		2		2		2	
Other (Explain)** Carryover enrollment minus degrees granted			250-0		350- 160		355- 135		385- 130	
TOTAL	250	215	350	301	355	305	385	331	430	370

^{*} List projected yearly cumulative ENROLLMENTS instead of admissions.

^{**} Do not include individuals counted in any PRIOR category in a given COLUMN.

^{***} If numbers appear in this category, they should go DOWN in later years.

Not applicable

DCU TABLE THREE-B NUMBER OF ANTICIPATED MAJORS FROM POTENTIAL SOURCES*

GRADUATE DEGREE PROGRAM

ACADEMIC YEAR	YEA	AR 1	YE	AR 2	YE	AR 3	YE	AR 4	YEAR 5	
Source of Students (Non-Duplicated Count in Any Given Year)*	нс	FTE	нс	FTE	нс	FTE	нс	FTE	нс	FTE
Individuals drawn from agencies/industries in your service area (e.g., older returning students)**										
Students who transfer from other graduate programs within the university***										
Individuals who have recently graduated from preceding degree programs at this university**										
Individuals who graduated from preceding degree programs at other Florida public universities										
Individuals who graduated from preceding degree programs at non-public Florida institutions**										
Additional in-state residents**										
Additional out-of-state residents**										
Additional foreign residents**										
Other (Explain)**										
TOTAL										

^{*} List projected yearly cumulative ENROLLMENTS instead of admissions.

^{**} Do not include individuals counted in any PRIOR category in a given COLUMN.

^{***} If numbers appear in this category, they should go DOWN in later years.

DCU TABLE FOUR COSTS FOR PROPOSED PROGRAM

This program will incur no additional costs over existing programs

		FIRS'	ΓYEAR		FIFTH YEAR					
INSTRUCTION &	General 1	Revenue	Contracts	Summary	General Revenue		Contracts	Summary		
RESEARCH	Current	New	& Grants	Summary	Current	New	& Grants			
POSITIONS (Person-years)										
Faculty					*	*	*	*		
A & P										
USPS										
TOTAL										
					* Cells should r	elate directly to	faculty numbers	in Table 2		
SALARY RATE			2002					-		
Faculty										
A & P										
USPS										
TOTAL										
I & R EXPENSES										
Salaries and Benefits										
Other Personnel Services										
Expenses										
Operating Capital Outlay										
Electronic Data Processing										
Library Resources										
Special Categories										
						and policinal individual in the control of the cont				