I. Minutes: Approval of minutes for Academic Senate meeting on November 21, 2000 (pp. 2-3).

II. Communications and Announcements:

III. Reports:
A. Academic Senate Chair:
B. President’s Office:
C. Provost’s Office:
D. Statewide Senators:
E. CFA Campus President:
F. ASI Representatives:
G. Other:

IV. Consent Agenda:

V. Business Item(s):
A. Resolution Choice of Catalog Requests Older Than 10 Years: Breitenbach, chair of Instruction Committee, second reading (p. 4).

B. Resolution on Information Technology Resources Responsible Use Policy:
Grimes/Stengel, IACC Committee, first reading (pp. 5-29).

C. Resolution to Prepare Proposal to Raise Standards for Mathematics at Cal Poly:
Harris, CENG academic senator, first reading (pp. 30-41).

D. Resolution on Consultation Procedures for FMI Criteria: Bethel, chair of Faculty Affairs Committee, first reading (to be distributed at meeting).

VI. Discussion Item(s):

VII. Adjournment:
Minutes of the
Academic Senate
Tuesday, November 21, 2000
UU220, 3:00 to 5:00pm

Preparatory: The meeting was opened at 3:10pm.

I. Minutes: The minutes of the October 24, 2000 Academic Senate meeting were approved without change.

II. Communication(s) and Announcement(s):

III. Reports:
   A. Academic Senate Chair: (Hood) The faculty referendum to approve a constitutional amendment granting Senate voting rights to the representative of part-time faculty/PCS employees was passed 223-90-8. A part-time representative will be appointed by the Executive Committee to serve the remainder of this year. Starting 2001-2002, the part-time representative will be elected by the part-time faculty/PCS employees.

   B. President’s Office: (Howard-Greene) Chancellor Reed will be visiting Cal Poly next Wednesday and Thursday to review the campus Master Plan. A schedule of meetings will be printed in a Monday edition of Cal Poly Report.

   C. Provost’s Office:

   D. Statewide Senators:

   E. CFA Campus President: (Fetzer) The Fact-Finder’s report is due next week and will be published for distribution in three weeks.

   F. ASI Representatives: (Love) ASI now has a newswire site for faculty: ASINewswire@hotmail.com.

   G. Other: Joe Grimes, chair of the Faculty Development Working Group gave a brief report on the committee’s charge. The group is looking at faculty development, what is being done and what needs to be done. A proposal will be submitted to the Senate for its review.

IV. Consent Agenda:
   Curriculum Course Proposals: Approved by consensus.

V. Business Item(s):
   A. Curriculum Program Proposals: second reading. M/S/P to approve the Curriculum Committee’s recommendations for program proposals as submitted.

   B. Resolution on Academic Program Review: second reading. The following paragraphs were added to the resolution as friendly amendments:

      WHEREAS, Accreditation processes conducted by highly respected national agencies for 27 of the Cal Poly Academic Programs may already provide all the essential requirements of program review,
including learning outcomes and accountability with respect to program goals; therefore, be it

RESOLVED: That all Cal Poly programs with accreditation or recognition review processes, which cover the essential elements of academic program review in accord with any CSU and Cal Poly mandated requirements should be able to fulfill all IALF program review requirements, using the same accreditation documents; and be it further

RESOLVED: That the Provost, in consultation with the college dean, the program administrator, and the Chair of the Academic Senate (or designee) determine whether the accreditation process covers the essential elements of academic program review in accordance with any CSU or Cal Poly mandated requirements.

M/S/P to approve the resolution as amended.

C. Resolution on Choice of Catalog Requests Older Than 10 Years: first reading. This resolution will return for second reading on January 23, 2001.

D. Resolution on Information Technology Resources Responsible Use Policy: first reading. This resolution will return as a continued first reading item on January 23, 2001.

VI. Discussion Item(s):

VII. Adjournment: Meeting was adjourned at 5:00pm.

Submitted by:

[Signature]
Margaret Camuso
Academic Senate
ADOPTED:

ACADEMIC SENATE
Of
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, CA

AS-___-00/
RESOLUTION ON
CHOICE OF CATALOG REQUESTS OLDER THAN 10 YEARS

WHEREAS, Some students leave Cal Poly without finishing their remaining
degree requirements; and

WHEREAS, There are no written guidelines for students who request to
graduate on a catalog older than 10 years; and

WHEREAS, The Chancellor's Office will not allow the back dating of degrees
or disclaimers on degrees indicating the majority of the
coursework was finished over ten years ago; and

WHEREAS, Cal Poly has a responsibility to ensure that degrees awarded with a
current date reflect learning that is reasonably up-to-date; therefore, be it

RESOLVED: Students may request to complete their degrees on a catalog older
than 10 years if the only remaining degree requirements at the time
they left Cal Poly do not exceed 16 units. These remaining degree
requirements may include senior project, GWR, and/or USCP; and
be it further

RESOLVED: The decision to approve or disapprove a student's request is based
on (1) her/his willingness to commit to completing outstanding
degree requirements within a specified timeframe, and (2) her/his
ability to demonstrate, with written documentation, reasonable
currency of knowledge and skills in her/his degree field to the
satisfaction of the faculty in the applicable major, as certified by
the department chair. Both the college dean and the Vice Provost
for Academic Programs & Undergraduate Education must give
their approval.

Proposed by: Academic Senate Instruction
Committee
October 13, 2000
WHEREAS, Information technology resources are a finite shared resource provided to students, faculty, and staff to support Cal Poly's mission of education, research, and service; and

WHEREAS, The University is accountable for ensuring that its resources are used responsibly; and

WHEREAS, A clear and comprehensive policy is needed to inform the campus community about appropriate use and to enable the University to act when misuses occur; and

WHEREAS, An interim policy has been in effect since the start of Fall Quarter 2000 and is posted on the Cal Poly web site at http://its.calpoly.edu/Policies/RUP-INT/; and

WHEREAS, The policy incorporates existing University, CSU, and state policies as well as federal and state laws, reflects best practices from other universities, and provides specific examples of appropriate and inappropriate uses; and

WHEREAS, The policy recognizes and respects academic freedom, freedom of expression, and the right to privacy of individual users wherever possible; and

WHEREAS, The policy uses established University processes to address alleged violations by Cal Poly students, faculty, and staff, and will be reviewed and updated at least annually to reflect changes in policy, the law, and technology; and

WHEREAS, Information Technology Services will consult with the Academic Senate and other campus constituent groups on substantive changes to this policy and on the development of related information technology policies and practices; and

WHEREAS, The Instructional Advisory Committee on Computing (IACC), Administrative Advisory Committee on Computing (AACC), and Information Resources Management Policy and Planning Committee (IRMPPC) have endorsed the policy and recommended that it be adopted and implemented by the University; therefore, be it

RESOLVED: That the Academic Senate endorse the Information Technology Resources Responsible Use Policy and recommend that it be adopted and implemented by the University.

Proposed by: Instructional Advisory Committee on Computing (IACC)
Date: October 23, 2000
Information Technology Resources
Responsible Use Policy (Interim)
Revised November, 2000

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Appendix A - [http://its.calpoly.edu/Policies/RUP-INT/define.doc](http://its.calpoly.edu/Policies/RUP-INT/define.doc)

Appendix B - [http://its.calpoly.edu/Policies/RUP-INT/example.doc](http://its.calpoly.edu/Policies/RUP-INT/example.doc)

Appendix C - [http://its.calpoly.edu/Policies/RUP-INT/refer.doc](http://its.calpoly.edu/Policies/RUP-INT/refer.doc)

California Polytechnic State University, San Luis Obispo

Information Technology Resources
Responsible Use Policy (Interim)
Revised November, 2000

A. Scope

This policy applies to any user of the University's information technology resources, whether initiated from a computer located on or off-campus. This includes any computer and information system or resource, including means of access, networks, and the data residing thereon. This policy applies to the use of all University information technology resources whether centrally-administered or locally-administered. Administrators of individual or dedicated University resources may enact additional policies specific to those resources provided they do not conflict with the provisions of this and other official policies and laws. Users are subject to both the provisions of this policy and any policies specific to the individual systems they use.

B. Purpose

The principal concern of this responsible use policy is the effective and efficient use of information technology resources. The primary focus is to insure that the resources are used in a manner that does not impair or impede the use of these resources by others in their pursuit of the mission of the University. This policy is intended to ensure:

1. the integrity, reliability, and good performance of University resources;
2. that the resource-user community operates according to established policies and applicable laws;
3. that these resources are used for their intended purposes; and
4. that appropriate measures are in place to assure the policy is honored.

The policy is intended to permit, rather than proscribe, reasonable resource-user access within institutional priorities and financial capabilities.

This policy is intended to promote and encourage responsible use while minimizing the potential for misuse and not imposing broad-based restrictions on all users.

C. Guiding Principles

The following principles underlie this policy and should guide its application and interpretation:

1. Freedom of thought, inquiry, and expression is a paramount value of the Cal Poly community. To preserve that freedom, the community relies on the integrity and responsible use of University resources by each of its members.

2. Information technology resources are provided to support the University's mission of education, research and service. To ensure that these shared and finite resources are used effectively to further the University's mission, each user has the responsibility to:
   a. use the resources appropriately and efficiently;
   b. respect the freedom and privacy of others;
c. protect the stability and security of the resources; and
d. understand and fully abide by established University policies and applicable public laws.

3. Responsible use of University resources will be given priority over the current or potential design, capability or functionality of specific information technology resources, including operating systems, hardware, software, and the Internet.

4. Users of information technology resources are expected to uphold the highest academic standards in accordance with the Campus Code of Conduct and other University policies and practices.

D. Policy Application

As a general guideline, the institution regards the principle of academic freedom to be a key factor in assuring the effective application of this policy and its procedures and practices. The law is another source of guidance. The University's role in supporting or acting to enforce such law is also critical to how this policy will be applied.

1. All existing laws (federal, state and local) and State of California, California State University and Cal Poly regulations and policies apply, including not only laws and regulations that are specific to computers and networks, but also those that may apply generally to personal conduct. This may also include laws of other states and countries where material is accessed electronically via University resources by users within those jurisdictions or material originating within those jurisdictions is accessed via University resources.

2. The accessibility of certain University information technology resources, such as network-based services, implies a degree of risk that the existence, viewing or receipt of such information/content may be offensive. As a matter of policy, the University protects expression by members of its community and does not wish to become an arbiter of what may be regarded as "offensive" by some members of the community. However, in exceptional cases, the University may decide that such material directed at individuals or classes of individuals presents such a hostile environment under the law that certain restrictive actions are warranted.

3. The University reserves the right to limit access to its resources when policies or laws are violated and to use appropriate means to safeguard its resources, preserve network/system integrity, and ensure continued service delivery at all times. This includes monitoring routing information of communications across its network services and transaction records residing on University resources, scanning systems attached to the Cal Poly network for security problems, disconnecting systems that have become a security hazard, and restricting the material transported across the network or posted on University systems.

E. Policy Provisions

1. Authorized Use / Access

Access to Cal Poly's information technology resources is a privilege granted to faculty, staff and students in support of their studies, instruction, duties as employees, official business with the University, and/or other University-sanctioned activities. Access may also be granted to individuals outside of Cal Poly for purposes consistent with the mission of the University.
With the exception of implicitly publicly accessible resources such as websites, access to Cal Poly information technology resources may not be transferred or extended by members of the University community to outside individuals or groups without prior approval of an authorized University official. Such access must be limited in nature and fall within the scope of the educational mission of the institution. The authorizing University official is expected to ensure that such access is not abused.

Gaining access to the University's information technology resources does not imply the right to use those resources. The University reserves the right to limit, restrict, remove or extend access to and privileges within, material posted on, or communications via its information technology resources, consistent with this policy, applicable law or as the result of University disciplinary processes, and irrespective of the originating access point.

It is expected that these resources will be used efficiently and responsibly in support of the mission of the University as set forth in this policy. All other use not consistent with this policy may be considered unauthorized use.

2. Data Security, Confidentiality and Privacy

Cal Poly users are responsible for ensuring the confidentiality and appropriate use of institutional data to which they are given access, ensuring the security of the equipment where such information is held or displayed, ensuring the security of any accounts issued in their name, and abiding by related privacy rights of students, faculty and staff concerning the use and release of personal information, as required by law or existing policies, including the Confidentiality-Security Policy and Policy on the Use and Release of Student Information.

Electronic mail and computer files are considered private to the fullest extent permitted by law. Access to such files will generally require permission of the sender/recipient of a message or the owner of the account in which the material resides, court order, or other actions defined by law. However, in the event of a sanctioned University investigation for alleged misconduct, e-mail or files may be locked or copied to prevent destruction and loss of information. Users may employ methods to increase the privacy of their files provided they do not violate any provision of this policy or degrade system/network performance.

All users of Cal Poly's information technology resources are advised to consider the open nature of information disseminated electronically, and should not assume any degree of privacy or restricted access to such information. Cal Poly strives to provide the highest degree of security when transferring data, but cannot be held responsible if these measures are circumvented and information is intercepted, copied, read, forged, destroyed or misused by others.

3. Electronic Information Retention and Disclosure

Original electronic materials and/or copies may be retained for specified periods of time on system backups and other locations; however the University does not warrant that such information can be retrieved. Unless otherwise required by law and/or policy, Cal Poly reserves the right to delete stored files and messages to preserve system integrity. Except in an emergency, users will be given advance notice to delete files and messages.
Electronic files or messages, whether or not created and stored on University resources, may constitute a University record subject to disclosure under the California Public Records Act (Government Code Section 6250-6270 and 6275-6277) or other laws, or as a result of litigation. Electronic copies must be provided in response to a public record request or legally issued subpoena, subject to very limited exceptions, as with other documents created and retained by the University.

Disclosure of confidential information to unauthorized persons or entities, or the use of such information for self-interest or advantage, is prohibited. Access to non-public institutional data by unauthorized persons or entities is prohibited.

Requests for disclosure of confidential information and retention of potential evidence in connection with alleged misconduct will be honored when approved by authorized University officials or required by law.

4. Network and System Integrity

In accordance with California State Penal Code Section 502, Cal Poly's Computer Crimes Policy, CSU's 4Cnet Acceptable Use Policy and other policies and laws, activities and behaviors that threaten the integrity of computer networks or systems are prohibited on both University-owned and privately-owned equipment operated on or through University resources. These activities and behaviors include but are not limited to:

- Interference with or disruption of computer systems and networks and related services, including but not limited to the propagation of computer "worms," "viruses" and "Trojan Horses"
- Intentionally or carelessly performing an act that places an excessive load on a computer or network to the extent that other users may be denied service or the use of electronic networks or information systems may be disrupted
- Failure to comply with requests from authorized University officials to discontinue activities that threaten the operation or integrity of computers, systems or networks
- Negligently or intentionally revealing passwords or otherwise permitting the use by others of University-assigned accounts for computer and network access. Individual password security is the responsibility of each user. The user is responsible for all uses of their accounts, independent of authorization.
- Altering or attempting to alter files or systems without authorization
- Unauthorized scanning of ports, computers and networks
- Unauthorized attempts to circumvent data protection schemes or uncover security loopholes
- Connecting unauthorized equipment to the campus network or computers. University authorized business and other activities directly related to the academic mission of the University are excluded.
- Attempting to alter any University computing or network components without authorization or beyond one's level of authorization, including but not limited to bridges, routers, hubs, wiring, connections, etc.
- Utilizing network or system identification numbers or names that are not assigned for one's specific use on the designated system

- Using campus resources to gain unauthorized access to any computer system and/or using someone else's computer without their permission

- Providing services or accounts on University computers or via University networks to other users from a personal computer unless required to meet the normal activities of students working as individuals or in collaborative groups to fulfill current course requirements. University authorized business and other activities directly related to the academic mission of the University, are also excluded.

- Registering a Cal Poly IP address with any other domain name

5. Commercial Use

Use of the University's information technology resources is strictly prohibited for unauthorized commercial activities, personal gain, and private, or otherwise unrelated to the University, business or fundraising. This includes soliciting, promoting, selling, marketing or advertising products or services, or reselling University resources.

Campus auxiliary organizations are authorized to provide services and products to students, faculty and staff, and invited guests of the University through operating and service support leases. The University President or designee may authorize additional limited commercial uses under separate policy provisions. Such uses are excepted from the above prohibitions. These prohibitions are not intended to infringe on authorized uses that enable students, staff and faculty to carry out their duties and assignments in support of the University mission.

(Detailed guidelines are being developed to clarify exceptions to this provision and will be incorporated or referenced in the next major revision.)

6. Political Advocacy

It is generally inappropriate for individual employees to use University resources to engage in political advocacy in election campaigns. State law generally prohibits the use of public funds for this purpose and Government Code Section 8314 makes it illegal for any state employee or consultant to use or permit others to use state resources for any campaign activity not authorized by law.

An employee can be held personally liable for intentionally or negligently violating Government Code Section 8314 for up to $1,000 per day the violation occurs plus three times the value of the unlawful use of state resources. Due to the personal nature of this activity, the State of California would not indemnify or defend the employee if an action was pursued against them for violating this statute.

The courts have yet to address the specific issue of whether an individual's use of state supported e-mail for political purposes violates the law. While the University may choose not to be involved in deciding whether a personal communication violates this provision, other policy provisions may apply and an employee may still be subject to personal liability under the law. Employees should exercise appropriate caution prior to engaging in such activities, which may have negative consequences for them and the University.
This provision does not apply to political activities related to on-campus student government, including the conduct of student elections, or student club activities and sponsored events conducted with prior approval of the University. Such activities must comply with all other provisions of this policy, including the section on electronic communications, when using University resources.

7. Harassment

Harassment of others via electronic methods is prohibited under California State Penal Code Section 653m, other applicable laws and University policies. It is a violation of this policy to use electronic means to harass, threaten, or otherwise cause harm to a specific individual(s), whether by direct or indirect reference. It may be a violation of this policy to use electronic means to harass or threaten groups of individuals by creating a hostile environment.

8. Copyright and Fair Use

Federal copyright law applies to all forms of information, including electronic communications, and violations are prohibited under this policy. Infringements of copyright laws include, but are not limited to, making unauthorized copies of any copyrighted material (including software, text, images, audio, and video), and displaying or distributing copyrighted materials over computer networks without the author's permission except as provided in limited form by copyright fair use restrictions. The "fair use" provision of the copyright law allows for limited reproduction and distribution of published works without permission for such purposes as criticism, news reporting, teaching (including multiple copies for classroom use), scholarship, or research. For more information on this issue, see Stanford University's Copyright and Fair Use website. The University will not tolerate academic cheating, plagiarism or theft of intellectual property in any form.

9. Trademarks and Patents

Student, faculty and staff use of University information technology resources in the creation of inventions and other intellectual property that may be patented, trademarked or licensed for commercial purposes must be consistent with Cal Poly's Intellectual Property Policy. Unauthorized use of trade secrets and trademarked names or symbols is prohibited. Use of Cal Poly's trademarked name and symbols must comply with the University policy on same (URL).

10. Electronic Communications

University electronic communications are to be used to enhance and facilitate teaching, learning, scholarly research, support academic experiences, to facilitate the effective business and administrative processes of the University, and to foster effective communications within the academic community. Electronic mail, news posts, chat sessions or any other form of electronic communication must comply with Cal Poly’s Electronic Mail Policy.

11. Web Sites

An official Cal Poly web page is one that is formally acknowledged by the chief officer of a University department or division as representing that entity accurately and in a manner consistent with Cal Poly’s mission. Without such
acknowledgment, a web site, regardless of content, is not "official." Official pages are the property and responsibility of the divisions that create them.

"Unofficial" information may also be posted and maintained by individual students, faculty, staff and student organizations. Cal Poly does not undertake to edit, screen, monitor, or censor information posted by unofficial authors, whether or not originated by unofficial authors or third parties, and does not accept any responsibility or liability for such information even when it is conveyed through University-owned servers.

Both official and unofficial web sites are subject to the other provisions of this policy if they use University resources such as University-owned servers and the Cal Poly network to transmit and receive information.

F. Policy Compliance

The Vice Provost/Chief Information Officer is authorized by the President to ensure that the appropriate processes to administer the policy are in place, communicated and followed by the University community. The Vice Provost/Chief Information Officer or designee will ensure that suspected violations and resultant actions receive the proper and immediate attention of the appropriate University officials, law enforcement, outside agencies, and disciplinary/grievance processes in accordance with due process.

The Vice Provost/Chief Information Officer or designee will inform users about the policy; receive and respond to complaints; collect and secure evidence as required; advise and assist University offices on the interpretation, investigation and enforcement of this policy; consult with University Legal Counsel on matters involving interpretation of law, campus policy, or requests from outside law enforcement agencies and/or legal counsel; and maintain a record of each incident and its resolution to inform future policy changes.

G. Consequences of Non-Compliance

Enforcement will be based upon receipt of one or more formal complaints about a specific incident or through discovery of a possible violation in the normal course of administering information technology resources.

First offenses and minor infractions of this policy, when accidental or unintentional, such as consuming excessive resources or overloading computer systems, are generally resolved informally by the unit administering the resource. This may be done through e-mail or in-person discussion and education.

Repeated offenses and serious incidents of non-compliance may lead to formal disciplinary actions under CSU and University disciplinary policies and procedures for students and employees and employee contract provisions where appropriate. Serious incidents of non-compliance include but are not limited to unauthorized use of computer resources, attempts to steal passwords or data, unauthorized use or copying of licensed materials, repeated harassment, or threatening behavior.

In addition to the above, inappropriate use of information technology resources may result in personal criminal, civil and other administrative liability.

Appeals of University actions resulting from enforcement of this policy will be handled through existing disciplinary/grievance processes for Cal Poly students and employees.

H. Reporting Irresponsible or Inappropriate Use
Suspected infractions of this policy should be reported to Information Technology Services at complaints@calpoly.edu in accordance with Appendix D, Policy Implementation and Practices. There might be situations when the following additional offices/officials should be notified of suspected violations when filing a complaint:

- **Supervisors, Department Heads/Chairs, Deans, Program Administrators** and/or one of the following offices if the incident occurs in the course of employment with the University:
  - **Human Resources and Employment Equity (State)** – (805) 756-2236
  - **Academic Personnel (Faculty Affairs)** – (805) 756-2844
  - **Human Resources (ASI)** – (805) 756-1281
  - **Human Resources (Foundation)** – (805) 756-1121

- **Academic Records** - If the incident involves inappropriate use of Cal Poly student information. The registrar is responsible for investigating reports of Family Educational Rights and Privacy Act of 1974 (FERPA) violations and maintaining records for the Department of Education. (805) 756-2531

- **Information Security Officer/Risk Manager** - If the incident involves inappropriate access to or use of institutional data. (805) 756-6755

- **Cal Poly University Police** - If an individual's health and safety appears to be in jeopardy or a violation of law may be involved. (805) 756-2281 or 911 (Emergency)

I. **Policy Review and Practices Oversight**

The Vice Provost for Information Technology/Chief Information Officer is responsible for application and enforcement of this policy. The Acceptable Use Policy sub-Committee (AUPC) of the Information Resources Management Policy and Planning Committee (IRMPPC) shall review this policy on an annual basis or as the need arises, make recommendations for any changes, and provide oversight and periodic review of the practices used to implement this policy. Recommended changes shall be reviewed and approved by the Vice Provost/Chief Information Officer in consultation with the IRMPPC and the President. The current version of the policy will be posted and maintained on the Cal Poly web site. A hard copy will be available at the Kennedy Library Reserve Desk.

J. **Glossary and Definition of Terms**

   **Appendix A** - [http://its.calpoly.edu/Policies/RUP-INT/define.doc](http://its.calpoly.edu/Policies/RUP-INT/define.doc)

K. **Specific Examples of Responsible and Irresponsible Uses**

   **Appendix B** - [http://its.calpoly.edu/Policies/RUP-INT/example.doc](http://its.calpoly.edu/Policies/RUP-INT/example.doc)

L. **References and Works Cited**

   **Appendix C** - [http://its.calpoly.edu/Policies/RUP-INT/refer.doc](http://its.calpoly.edu/Policies/RUP-INT/refer.doc)

M. **Policy Implementation and Practices**

Access
Ability given to individual or groups of users to use information stored on or via University resources. This includes but is not limited to the ability to read, write, view, create, alter, store, retrieve, and disseminate information.

Account
That combination of user name and password that provides an individual with access to a computer system or computer network.

Administrator
An individual responsible for administering a computer system or campus unit.

Authorized University Officials
Administrators or designees with the authority to make decisions about or approve a specific action, activity, service or use of a specific resource.

Non-authorized, Unauthorized
Applies to individuals without the authority or permission, as defined by the University, to initiate or approve an activity or service and/or to access or use a specific resource.

Auxiliary Organizations
Non-State and self-support organizations affiliated with the University, including Cal Poly Foundation and Associated Students, Inc. (ASI).

Broadcast
Method for sending a uniform message to an entire set of users qualified by membership in a definable group such as faculty, staff, students, engineering majors, etc.

Campuswide Shared IT Resources
Information technology resources implemented and managed by Information Technology Services. Examples include the Cal Poly network and modem pool, IBM mainframe, central UNIX servers, open access computing labs, "smart" classrooms, training lab, etc.

Chain Letter
An e-mail message asking the recipient to indiscriminately forward or pass it along; may involve money-making pyramid schemes or be disguised as innocent (e.g., collecting post cards for a dying child) or helpful (e.g., warnings about computer virus hoaxes).
Information Technology Resources
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Commercial Activity
An activity conducted for commercial/private profit or gain or non-profit fundraising. This includes but is not limited to soliciting sales or funds, marketing or advertising a product or service, posting an advertisement to a newsgroup, and reselling University resources. University authorized commercial activities are excepted, e.g., El Corral Bookstore and Enterprise Project sales. Detailed guidelines are being developed to clarify exceptions.

Computer Systems
Any computing resource, service, or network system, including workstations, servers, networks, storage devices, peripheral equipment, input/output and connecting devices, data processing functions, and related records, programs, software and documentation.

Copyright Infringement
Copying, distributing, publicly performing, publicly displaying a copyrighted work, or creating a derivative work, without the permission of, or a license from, the copyright owner.

Electronic Communications
Any electronic method used to communicate, including but not limited to electronic mail, the Internet/World Wide Web, video recordings, facsimiles, pagers, telephones, etc. Electronic communications has the same meaning as the term defined in Subsection 12 of Section 2510 of Title 18 of the United States Code.

E-mail
Electronic method of sending and receiving messages from and to electronic addresses associated with specific owners.

E-Mail Reflector
The automated or otherwise forwarding of an e-mail message to multiple recipients triggered by the content of the mail message being forwarded.

Family Educational Rights and Privacy Act (FERPA)
Federal law protecting students (and former students) from the release of educational related records retained by the University.

Inappropriate Use
Activities that interfere with the primary intended use of supporting instructional activities, e.g., excessive game playing.

Information Technology Resources
Any data or information stored in digital form and the computer systems or other means used to access that information.
Information Technology Resources
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Information Technology Services
The administrative entity charged with implementing and managing campuswide information technology resources under the direction of the Vice Provost/Chief Information Officer.

Institutional Data
Information about individuals and departments that is recorded, maintained, administered and retained by the University, e.g. information in student records and employee files, financial data, etc.

Intellectual Property
Inventions, discoveries, innovations, and literary and artistic works that may be patented, copyrighted, trademarked or licensed for commercial purposes

IRMPPC
Information Resources Management Policy and Planning Committee is chaired by the Vice Provost/Chief Information Officer and charged with ongoing assessment of strategic plans and policies related to campuswide management and use of existing and planned information systems and services

Mail Bombing
The practice of bombarding someone with a large volume of unsolicited mail in an attempt to disrupt them or their site

Newsgroup
E-mail discussion group using a "news" message distribution protocol organized around named topics. Newsgroups can be global, regional, or local with regard to their access and distribution. While messages are submitted using e-mail, they are read from a central repository instead of being delivered to individual e-mail addresses.

Network
A group of computers and the associated equipment and transmission media used for the purpose of sending and receiving data, voice or video signals

Network/System Integrity and Reliability
Maintaining optimum performance and availability of information technology resources in support of the University mission

Personal Gain
Receiving money or other goods or services as a result of soliciting, promoting, selling, marketing or advertising products or services

Political Advocacy
Promoting, advocating or supporting a specific candidate, political party or issue
**Port Scanning**

Using software to access or query all known TCP ports on a system to try to identify which services and levels of security are associated with those ports. A method for determining if a network or system can be compromised.

**“Spam”**

Indiscriminate mailing or forwarding of unsolicited e-mail to a larger group of users.

**System Administrator**

Person responsible for administering the hardware, operating system, and software that constitutes a computer system.

**System Alias**

An alias established on Central UNIX by a system administrator, using addresses contained in a file that can be edited by the alias owner.

**Systems**

See "Computer System".

**Trade Secret**

A process, method, plan, formula or other information unique to a manufacturer, which gives it an advantage over competitors, and therefore must be kept secret to be of special value. May be legally protected against use or revelation by others.

**Trademark**

A name, symbol, or other device identifying a product, legally restricted to the use of the owner or manufacturer.

**Trojan Horse**

A malicious, security-breaking program that is disguised as something benign, e.g., a directory lister, archiver, or game.

**University / Cal Poly**

The institution as a whole or the collective authority of the institution represented by established policies and designated officials responsible for enforcing them.

**University Resources**

Any resource belonging to or employed by the University, including equipment, facilities, and staff.

**User**

Anyone who has been provided access to Cal Poly’s information technology resources, including the general public.
Virus
A program that searches out other programs and "infects" them by embedding a copy of itself in them. When these programs are executed, the embedded virus is executed too, thus propagating the "infection". A virus may write messages on the terminal, or play strange tricks with the display or cause irreversible damage such as deleting all of a user's files. Unlike a worm, a virus cannot infect other computers without assistance.

Web Site
Web page files (beginning with an initial home page) located on a campus server and owned through a computer account by University faculty, staff, students, administrative units, organizations, clubs and auxiliaries

Worm
A program that propagates itself over a network, reproducing itself as it goes
Information Technology Resources
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Appendix B
Specific Examples of Responsible and Irresponsible Uses

Appropriate Uses

Authorized Use

- A student working with a professor uses University computers to set up a web page for his senior project.
- A student, faculty or staff member uses their University account to set up an "unofficial," personal web page with pictures from their summer vacation.
- A student browses web sites not directly related to their role at the University.
- A very ill student gives their password to another student to check e-mail on their behalf.
- A staff member away from campus delegates another staff member to read and respond to e-mail and calendar items in their absence. They provide their login ID and password to the same staff member to permit others to access files in their absence.

Network/System Integrity

- A student sets up a web site on their computer in the residence halls and grants permission to other users to download via Cal Poly's network some audio/video clips that he created.
- A student makes an intra-campus file transfer to a designated computer in order to share a file that one or more students are using in a class.
- A student creates user accounts on their own computer to allow access to shared files for a group project via the Cal Poly network.
- A student resident runs a web server on their own computer that provides pictures of a recent trip to Tahoe.
- A student uses the Cal Poly network to play online games provided other network users are not adversely impacted.
- A network administrator conducts a port scan of the computers attached to that network.

Commercial Use

- A faculty member uses their Cal Poly e-mail account to communicate with a publisher about a textbook they are developing for a course they teach.
- Posting a notice about items for sale to a newsgroup intended for that purpose or to an off-campus commercial web site, such as e-bay.
- Using Cal Poly e-mail to apply for a grant.
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- Using Cal Poly e-mail to communicate with potential employers.
- A Cal Poly staff member uses the Cal Poly network to "telecommute" from home.
- An ASI student club uses its Cal Poly web page to announce an upcoming, approved event for which students will be charged a fee.
- The Cal Poly Animal Science Department uses their departmental web site to display photos of animals to be sold at an upcoming auction as part of an authorized enterprise project. Outside bidders are instructed to e-mail bids to the Cal Poly Foundation.

Electronic Communications
- A student uses their Cal Poly e-mail account to send e-mail to friends and family.
- Incidental personal use by faculty and staff is reasonable provided it does not interfere with assigned work or negatively impact other users.
- With the approval of the department head and using a system alias, an administrative assistant e-mails every member of the department about an upcoming event.
- A faculty member e-mails an assignment to all the students in a course.
- A student, faculty or staff member deletes "spam" e-mail originating from a system other than Cal Poly or responds to the sender and asks to be removed.
- A faculty member creates a web page and includes a link to someone else's web page.

Copyright
- A staff member is beta-testing software that can fix a problem on another staff member's machine. They contact the manufacturer and get permission to install the upgrade on the other person's machine which has a legally obtained copy of the current product installed.
- A student uses the same commands another person used to create a table on the web.
- A student posts photographs they took on their web page.
- A faculty member incorporates copyrighted materials in their course materials after first obtaining permission of the publishers of the materials.
- A faculty member distributes copies of a brief excerpt from a larger work in class and then retrieves the copies after class is over.

Data Security
- A faculty member retrieves online information about a student in their class. A counselor reviews a student's record in order to counsel them as to which classes to take.
- A staff member uses SIS to generate a report about all the students in the department and their current status for the department head to review.
Harassment

• A student working on a computer in a lab creates or downloads one or more images that may disturb or offend others. They remove the images before leaving the facility or relocate to another workstation that is less visible to other users to work on this project.

Political Advocacy

• A faculty member uses University equipment to videotape or broadcast, with appropriate permissions, a live debate between candidates to students in a political science course.

• Posting an opinion about a candidate or issue to a newsgroup intended for that purpose.

• A student running for an ASI office uses a web page to discuss their platform and to collect e-mail addresses of potential supporters. The student uses the addresses to disseminate an e-mail message encouraging them to get students to vote in the election.

Trademarks and Patents

• Displaying the Cal Poly logo on an "official" Cal Poly web page.

Inappropriate Uses

Authorized Use

• A student gives their login ID and password to a relative or friend outside of Cal Poly so they can post materials to the student's web site.

• A faculty member allows family members to use a Cal Poly account and Internet connection to browse the web and to send e-mail from home.

• An administrator who is not using their Cal Poly account gives their login ID and password to the director of a local non-profit group who uses it to create a web page, send e-mail, etc.

• Without permission, a student accesses a faculty member's computer to view an insecure file containing test questions.

Commercial Use

• Displaying personal items for sale on a web page residing on or transmitted through University resources.

• Displaying commercial advertisements on a web page hosted on University resources.

• Using a Cal Poly account to create and host a web site for a local organization promoting fundraisers and other commercial activities.

• Using a Cal Poly account to operate or conduct non-University related business activities, including financial management, advertising and promotion, correspondence, web sites, etc.

• An administrative assistant supplements income by typing senior projects and master thesis using a University workstation and laser printer in the office.
Information Technology Resources
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- A faculty member working on a personal government contract frequently asks departmental staff to convert report documents into the format required by the agency and assist with various aspects of the project without compensating the department.
- Using the Cal Poly network to "telecommute" to non-University employers.

Electronic Communications
- A Cal Poly user forwards e-mail about a sick child and efforts to raise funds or send wishes or good luck to several other people on campus. The e-mail encourages recipients to pass the message along to as many people as possible.
- A Cal Poly user broadcasts a message on a current topic of interest to several newsgroups or system aliases, none of which have to do with that particular topic. For example, a user posts a message about abortion issues to a newsgroup about English poetry or sends a message about an upcoming student club event to a campus computing committee.

Copyright
- A department buys a single license copy of a software product and installs it on all the workstations in a student computer lab.
- Extensive excerpts from a copyrighted work are distributed by e-mail or displayed on a web page without obtaining the permission of the author/publisher.
- Photographs or images taken from another web page without the owner's permission are displayed on a web page residing on or accessed via University resources.
- In violation of the manufacturer's license agreement, a faculty or staff member installs software purchased for departmental use on their home computer or allows students to borrow software to install on their home machines.
- A student redistributes copies of software, music or other digital materials via the Internet. The student may have legally obtained these materials but does not have permission to redistribute them to others.
- Using anonymous FTP, web sites, web servers, Napster or similar programs to provide access to illegally obtained or copyrighted materials used without proper permissions.

Data Security
- A faculty member is curious about the activities of a student and attempts to read any public access files in that student's central UNIX account.
- A student assistant with access to SIS uses that access to view other students' grades.
- A staff member discloses personal information to a relative of a student who has requested that their information not be disclosed.
- A staff member uses HRS to look up the home address and telephone number of a faculty member and gives that information to a student.
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- A faculty member uses SIS to generate a mailing list of students in a specific discipline for the purpose of sending personal mail from home that is unrelated to University business.

Network/System Integrity
- Using Cal Poly resources, including the network, to propagate a computer virus, Trojan Horse, worm, and/or denial of service attack.
- A faculty member recklessly initiates a process on Central UNIX that causes response times to slow to a crawl and the system to be taken down and rebooted to fix the problem.
- Hosting an anonymous FTP server.
- Using any program that in anyway disrupts, harms, or infiltrates another computer, such as WinNuke, BackOrifice or a packet sniffer.
- Making extensive use of chat rooms and interactive games on the web, causing network and/or system performance to degrade.
- A dorm resident conducts a port scan of the residence hall network without permission of the network administrator.
- Anyone conducts any port scan of an external network via the Cal Poly network without permission of the network administrators.

Political Advocacy
- A student, staff or faculty member running for a local political office creates a web page to promote their candidacy, which resides on or is accessed via University resources.
- A faculty or staff member creates and uses an email distribution list to solicit contributions, signatures, or other support on behalf of a particular candidate or ballot measure.

Harassment
- Displaying an intimate, suggestive or disturbing image which a reasonable person would consider objectionable as the "wallpaper" or screen saver on a computer that is routinely visible to other students, staff and faculty.
- Repeatedly sending threatening or harassing email or voice mail to another individual.

Trademarks and Patents
- Without obtaining permission in advance, a non-Cal Poly web site displays the Cal Poly logo, displays the Cal Poly home page design, or displays the University name in such a way as to imply University endorsement or affiliation.
- Without permission of the manufacturer, a user beta testing a new commercial software product loads it on a server and posts a message announcing that the software is available to anyone at that location.
Appendix C
References and Works Cited

California Polytechnic State University:

"Academic Dishonesty: Cheating and Plagiarism" (CAM 684)  
(http://www.calpoly.edu/∼acadsen/Cheating&Plagiarism.html)

"Campus Code of Conduct" (http://www.calpoly.edu/∼saffairs/csrja/causes.html)

"Family Educational Rights and Privacy Act (FERPA) Policies and Procedures"  
(http://www.ess.calpoly.edu/∼records/ferpa.htm)

"Use and Release of Student Information Policy"  
(http://www.ess.calpoly.edu/∼records/ferpa_rt.htm)

"Intellectual Property Rights Policy" (http://www.calpoly.edu/∼rgp/pdf/IntelProp.pdf)

#AB93-1 (April 5, 1993)


The California State University, "4Cnet Acceptable Use Policy"

California Computer Crime Law, California Penal Code, Sections 502 and 502.1  
(http://www.cob.calpoly.edu/COMPLAB/502.html)

California State Penal Code Section 653m and other applicable laws  
(http://www.calpoly.edu/∼its/CU_Policies/state_or_federal_law.htm)

California Government Code, Section 8314  
(http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=08001-09000&file=8310-8317)

California Public Records Act  
(http://www.genlaw.lanl.gov/legal/subject_areas/privacy/cpra.html)

Information Practices Act of 1977
Places specific requirements on state agencies for collection, use, maintenance and  
dissemination of information relating to individuals.

More information on current Assembly Bills and other California Laws can be accessed at the  
web site http://www.leginfo.ca.gov/
Information Technology Resources
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U.S. Copyright Office and Federal Copyright Laws (http://www.loc.gov/copyright/title17/)

Stanford University's Copyright and Fair Use website (http://fairuse.stanford.edu/)

In addition to the works cited above and in the policy itself, computer policies and procedures from the following institutions were consulted, adapted and/or reviewed in developing this policy:

Authority SUNY Potsdam (http://www.potsdam.edu/isd/policies/AUP.html#Authority)

Brown University (http://www.brown.edu/webmaster/TM009.html)

Cornell University (http://www.univco.cornell.edu/policy/RU.html)

Georgetown University (http://www.georgetown.edu/technology/use/use.html)

Lewis & Clark College (http://www.lclark.edu/~infotech/POLICIES/RespUse.html)

Princeton University (http://www.princeton.edu/~policy/Ware/Abouttheguidelines.shtml)

University of Delaware (http://www.udel.edu/eileen/newEcce/guide.020293.html)

University of Oregon (http://cc.uoregon.edu/aup_addend.html)

University of Pennsylvania (http://www.upenn.edu/computing/help/doc/passport/policies.html)

Yale University (http://www.yale.edu/policy/policy_doc.html)
A. Complaint Filing:
   a. Complaints may be filed with Information Technology Services (ITS) via e-mail (complaints@calpoly.edu), telephone (805-756-7000), in writing, in person, or internally through routine monitoring and detection of a system/network problem or unusual event.
   b. Complaints must be filed by the individual who was harmed or by the administrator of the network/system that was harmed by the use. Cal Poly will respond to requests for assistance from law enforcement accompanied by a court order, subpoena or search warrant.
   c. Cal Poly will act on anonymous and third party complaints only in the event of a health and safety issue. Otherwise, the individual who has been harmed will be contacted and asked to file a formal complaint.
   d. Suspected infractions occurring on external or departmental systems should be reported to the administrator responsible for the system or network. A copy should be sent to complaints@calpoly.edu for tracking.
   e. System and network administrators, supervisors or offices receiving a complaint or discovering a possible violation should notify complaints@calpoly.edu.
   f. ITS may also be contacted to report infractions when the complainant is unable, or it is not desirable, to do so through other channels.

B. Complaint Review and Investigation:
   a. The Vice Provost/Chief Information Officer or designee reviews each complaint to initially determine whether a potential policy or legal violation has occurred based on the evidence provided.
      i. If not, the complainant is notified in writing as to why it does not constitute a violation and the incident will be closed.
      ii. If yes, but additional information is needed, the complainant will be asked to provide it, e.g., system logs, e-mail headers.
      iii. If yes, but the violation does not involve University resources, the complainant will be advised on what if any action they can take.
      iv. If the complainant fails to produce enough evidence to make a determination, they will be notified and the incident will be closed and filed for future reference.
   b. If it appears a violation has occurred and sufficient evidence has been gathered, ITS will make an initial determination as to what happened, where it happened, and who initiated the activity.
      i. If the event occurs on a centrally-managed system, ITS will investigate further and seek informal or formal resolution.
      ii. If the event occurs on a decentralized system, ITS will refer it to the appropriate system administrator to investigate and report back to ITS on any findings and actions taken. ITS may elect to take further action based on
Information Technology Resources  
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those reports. ITS may recommend preventative measures to avoid future violations.

c. A serious incident may result in simultaneous investigations and actions by ITS, non-ITS system/network administrators, and law enforcement.
d. Public Affairs will be contacted to represent the University if the matter requires interaction with the public, media or other outside interests.
e. ITS will assist University officials with securing and interpreting evidence and conducting investigations when requested or legally required to do so.

C. Informal Resolution

a. Once ITS has determined that a violation has occurred and the nature of the violation is known, the Vice Provost/Chief Information Officer or designee will contact the alleged violator by e-mail, phone or in-person to informally resolve the complaint.
b. The individual will be advised of the nature of the complaint and the evidence collected and asked to provide an explanation.
c. If the individual does not appear to be responsible (e.g., a third party misused their account), ITS will counsel the user on how to prevent future occurrences of the specific problem and continue its investigation.
d. If a Cal Poly community member is responsible but the violation appears to be accidental or unintentional on their part, ITS will counsel the user on how to prevent future occurrences of the specific problem.
e. If they have no history of prior violations, they will generally be given a warning and advised that future violations will result in formal action.
f. Individuals with a prior history of violations or involved in a serious violation will be referred to the appropriate campus authority for formal action and resolution.

D. Formal Resolution

a. Formal actions, including disciplinary hearings, imposition of sanctions, and appeals will be handled through existing disciplinary/grievance processes for Cal Poly students, faculty and staff.
b. ITS will refer such incidents to the designated campus authority:
   i. Students will be referred to the Office of Campus Student Relations and Judicial Affairs/Student Affairs
   ii. Staff will be referred to the appropriate Human Resources department (State, ASI, Foundation)
   iii. Faculty will be referred to Academic Personnel

c. The following individuals may also be contacted: sponsor, advisor, supervisor, department head/chair, dean, and/or program administrator/manager.
d. Matters involving misuse of institutional data will be referred to the campus Information Security Officer and, if student information is involved, Academic Records.
e. Potential legal violations and threats to individual health and safety will be referred to the Cal Poly University Police.
f. ITS may confer with University Legal Counsel to help determine if a legal violation has occurred.
g. Based on their investigation, University Police may refer these to the local district attorney or the University for further action.
E. Final Disposition
   a. ITS will notify the complainant as to the disposition of their complaint. This could range from advising as to why the matter does not constitute a violation to providing final notice that the matter has been resolved.
   b. Specific information about the individual involved will not be disclosed.
   c. ITS will record each incident and its resolution to track recurring violations and repeat offenders and to inform future changes to the policy/practices.
   d. ITS will implement technical sanctions imposed by the designated campus authority as a result of a formal disciplinary process or as required by law.
WHEREAS, K-12 students in the State of California rank near the bottom of the 50 states in standardized math and science testing scores, and the United States ranks in the middle of the developed nations in K-12 math and science testing scores; and

WHEREAS, A review of the undergraduate programs at Cal Poly show that approximately half of the programs (most in the Colleges of Liberal Arts and Agriculture) require only the satisfaction of Math 118, and that over half of those programs defer to the GE Area B requirements for satisfaction of college graduation requirements in mathematics; and

WHEREAS, The current GE Area B.2 requirements (2000-01 Catalog) establish a lower bound of eight course units for a Cal Poly graduate’s knowledge of mathematics for graduation, of which all eight units can be statistics (knowledge that is normally not taught in high school), and therefore it is possible for some students to graduate from Cal Poly without taking one MATH prefix course; and

WHEREAS, The mathematical knowledge and skills covered in Math 118 are taught in high school courses; and

WHEREAS, There are few mathematics courses in the catalog that require the material in Math 118 as a prerequisite other than those that teach calculus or that require just high school mathematics knowledge and skills specified for admission to Cal Poly as a prerequisite; and

WHEREAS, It is recognized that increasing the level of mathematical knowledge and skills will raise the standards of the required education in science for Cal Poly graduates; and

WHEREAS, Raising the minimum standards of knowledge in math and science for Cal Poly graduates has the potential of raising the standards of excellence for those entering the teaching credential programs for K-12 education; and
WHEREAS, It is recognized that additional resources will be required to develop new math courses and to teach these courses in addition to those now needed by our entering students; and

WHEREAS, It is recognized that Cal Poly is a leader in undergraduate polytechnic education in the state and nation and that the standards required for our graduates can be a model for other CSU campuses; and

WHEREAS, The attached white paper has been reviewed by a meeting of interested parties including faculty of UCTE, Liberal Studies, and the Mathematics Department, by the GE Area B subcommittee, by the chair of the Curriculum Committee of the College of Agriculture, by the Curriculum Committee of the College of Liberal Arts and has been made available to all program chairs within the Colleges of Agriculture and Liberal Arts and members of the Academic Senate, and further, has been reviewed by the Academic Senate Curriculum Committee and the GE Program Director; therefore, be it

RESOLVED: That the Academic Senate request the General Education Area B subcommittee to prepare a revision to the minimum mathematics requirement that adds a requirement for a four unit mathematics course that presents knowledge beyond that currently taught in high school, that those courses need not necessarily be based upon calculus, and that said proposal be prepared prior to 2003 per the schedule of the GE template policy; and be it further

RESOLVED: That the Academic Senate request the President and Provost develop plans and allocate sufficient one time resources so that said mathematics courses can be developed and allocate sufficient operational resources so said mathematics courses will be operationally available for students by Fall 2003; and be it further

RESOLVED: That the Provost and the Chair of the Academic Senate Curriculum Committee make reports at least once per quarter to the Academic Senate on the progress of the implementation of this resolution.

Proposed by: James G. Harris, CENG Academic Senator
Date: July 25, 2000
Revised: November 9, 2000
White Paper on Mathematics Requirements for Cal Poly Graduates
By James G. Harris
(based upon remarks at Academic Senate on October 5, 1999)

Numerous publications have documented that K-12 students in the United States score well below students in other nations in math and science in standardized tests (the tests are a point of controversy). To further exacerbate the situation, K-12 students in California rank near the bottom of the states in standardized tests on math and science. Ironically, after four (or five) years of college, the US undergraduates graduating in Math, Science and Engineering are the envy of the world. It has been stated that Cal Poly is enrolling better students every year if entering GPA and test scores are used as the measure of comparison. In summary, K-12 students in California do not fare well in their understanding of math and science from a national perspective, and fare even worse from an international perspective. However, Cal Poly graduates in the mathematics, science and engineering disciplines have a good reputation amongst their peers in the national and world community.

It is with this background that I made my remarks concerning the GE&B mathematics requirements at the Academic Senate meeting on October 5, 1999. These remarks were provoked by the name change proposed for MATH 327, 328, and 329 from Introduction to Modern Mathematics, Introduction to Modern Mathematics, and Mathematical Applications to Elementary Teaching I, II, and III, respectively. This sequence of courses requires a prerequisite of MATH 118, Pre-Calculus Algebra, a course which consists of material covered in high school, and the name change fairly represents the objectives of the course.

A study of the math requirements for the undergraduate programs at Cal Poly shows that graduates of over half of the approximately 60 degree programs can graduate having taken only MATH 118. Furthermore, over half of these programs defer to the GE&B area B requirements for the satisfaction of college graduation requirements in Mathematics. Most of these programs are housed within the Colleges of Agriculture and Liberal Arts. It is noted that these graduates represent the largest pool of future K-12 teachers within Cal Poly.

The GE&B area B.1 requirements establish an lower bound of eight course units for a Cal Poly graduate's knowledge of mathematics upon graduation. These eight units can consist of both Mathematics and Statistics courses. Statistics normally is not taught in high school, and therefore, can be considered college material. Therefore, assuming a student enrolls in one four unit Statistics course, the issue being discussed is the requirement for one four unit Mathematics course. The proposition is that this single four unit course should contain knowledge beyond a high school proficiency in college preparatory mathematics, i.e., a course that requires Math 118 as a prerequisite.

This proposed increase in the minimum level of mathematical content for graduation from Cal Poly presents at least two major problems. The first problem is that there are no freshman year, or sophomore year, courses with a MATH prefix that require only MATH 118 as a prerequisite other than the calculus, or courses based upon the calculus. Courses in discrete mathematics, mathematical knowledge for the foundation for computation if you will, are no longer available; MATH 124, Finite Mathematics, is no longer offered in the catalog, and CSC 141, Discrete Structures, is taught in the Computer Science department, and requires CSC 102, Fundamentals of Computer Science II, as a corequisite. The second problem is that this increase in the minimum level of mathematical proficiency for Cal Poly graduates will require additional resources to be allocated for implementation. To illustrate this second problem,
assume that half of the incoming freshman satisfy their mathematics course requirement with CSC 118. This means that approximately 2000 students will have to take one additional four unit MATH course, about 8000 SCUs, or about 60 sections for 240 WTUs, or, for the sake of argument, say four faculty positions. An estimate of the cost is therefore approximately $300K per year, plus expenses to develop the new courses in discrete mathematics.

Again, the goal of raising the minimum standard for the mathematical proficiency of the Cal Poly graduate is to produce better candidates for entering the teaching profession for K-12. Raising the level of mathematical proficiency also will allow a more rigorous treatment within the lower division science courses, which should allow these courses to raise their standards for the students. This proposal is submitted with the faith that entering Cal Poly freshman will rise to the challenge of the higher standard, and with the prediction that eventually through the improved preparation of K-12 teachers, the mathematics and science education of K-12 students, and especially elementary students, will be improved. The proposal also will enhance Cal Poly's reputation for leadership in undergraduate education for publicly supported colleges and universities.

Addendum 30 October 2000

It is clear that this proposal is not being well received by those that have an interest in the status quo. Therefore, given that I am just a professor in the Department of Electrical Engineering and Computer Engineering Program, the issue is being raised that I am just being a meddler in an area that is not my expertise. My interest in the issue of mathematics and science education in the K-12 segment goes back to at least 1990-92. During that time I was fortunate to have been appointed a program director in the Division of Undergraduate Education of the Directorate of Education and Human Resources of the National Science Foundation. The issue of the state of math and science education in the United States of America relative to other countries was a big topic of study at that time, and lots of discussions were held at NSF and other organizations on this issue. The problem was even more acute in the state of California given our K-12 test scores, and national ranking (near the bottom of the 50 states). Thus, when the issue was raised on the floor of the Cal Poly Academic Senate in 1999, it was with this background that I chose to act.

Subsequent to writing the white paper, the 2000-2001 catalog has been issued, and the Mathematics requirements for GE&B area B2 have been modified. Now, an entering student whose major defers to the GE&B mathematics requirements for graduation (about one quarter of the majors) need not take a single MATH prefix course for graduation, i.e., the only mathematics knowledge that they might have acquired would have been taken in high school. (The Area B2 requirements now can be satisfied with two STAT courses.)

In addition, it has been brought to my attention, that there has been imposed a campus moratorium on modifications to the GE&B template until 2003. Therefore, it seems to me that it is even more imperative that a study be initiated now to provide a mechanism for the raising of the mathematics standards for the graduates of Cal Poly and for the support of its implementation. Therefore, I have taken this opportunity to revise the resolution accordingly.
MEMORANDUM

TO: Myron Hood, Chair
    Academic Senate

FROM: Samuel Aborne, President
    Associated Students, Inc.

DATE: October 26, 2000

COPIES: President Warren Baker
         Paul Zinng, Provost
         Vice President of Academic
         Affairs
         Melissa Varckak, ASI Chair
         of the Board

SUBJECT: Resolution to Raise Math Standards at Cal Poly

I feel that the resolution is not in the best interests of the students. It disproportionately affects the students in the Colleges of Agriculture and Liberal Arts. As written, the resolution implies that because of the decrease in high school math test scores, students at Cal Poly who are enrolled in those programs on campus that lead to teacher credentialing should have their math standards increased with the addition of a mathematics course above the high school level. What the resolution does not address is the fact that there are many reasons why a student may perform poorly on national standardized tests.

I feel that the addition of a mathematics course to these degree programs would serve as an unnecessary barrier to graduation and furthermore, possibly inhibit students from progressing towards the completion of their degree. I also feel that it would be premature to add additional degree requirements without the completion of an effective analysis that indicates the potential and substantial benefits this resolution would have upon those students pursuing a Teacher’s Credential.

However, I would possibly be interested in an alternate proposal that addressed the concerns listed above and reflected a change in the resolution concerning the math curriculum in those programs that lead to multi-subject credentials (K-8 Education) instead of those programs that lead to single-subject credentials. I believe an alternative proposal would achieve the desired effects of the author and student success at Cal Poly would not be hindered.
To: Myron Hood  
Chair, Academic Senate

From: Doug Keesey  
Chair, Senate Curriculum Committee

Due: October 19, 2000

Subject: Curriculum Committee’s Response to Math Resolution

Copies: Senate Curriculum Committee, Jim Harris, Kent Morrison, Jim Mueller, John Harrington, Bob Cichowski, Sue McBride, Margaret Camuso

Jim Harris visited the Senate Curriculum Committee today, and explained that the intent of his resolution was to set in motion a process to study the possibility of raising the standards for mathematics at Cal Poly, both in terms of curriculum and resources. However, the resolution, as currently stated, uses language that seems to call for more than that: “Resolution to Raise the Standards for Mathematics at Cal Poly,” “to prepare...a revision to the minimum mathematics requirements that adds a requirement for a four unit mathematics course...,” and to “develop plans and allocate sufficient one-time resources so that said mathematics course can be developed.” We believe that the resolution, as currently written, does not accurately reflect the intent of the proposer.

The majority of those responding to the resolution seem to have interpreted it as proposing that this additional math requirement actually be implemented. The Curriculum Committee does not support the implementation of this additional math requirement. For reasons, see the written statements from Liberal Studies, UCTE, the GE Area B/F Subcommittee, and the GE Committee, who do not support the resolution and who provide reasons for their opposition.

However, if the resolution can be interpreted more broadly as calling for further study—of the kinds of math classes offered at Cal Poly, of the kinds of math classes different majors are advised to take, and of the kinds and levels of teacher preparation in math—then some members of our Committee could see possible advantages to this further study. Should the Math Department’s course in discrete math have been eliminated? Should the possibility of placing more emphasis on applied math, or math studied in the context of particular disciplines, be considered? At this time, we do not see the purpose of framing this possibility of further study in the form of a resolution to be brought before the Senate. However, we encourage faculty interested in doing this further study to meet and begin exploring whether there are issues of common concern and directions which they can agree to pursue.
To: Myron Hood  
   Chair, Academic Senate  
From: Doug Keesey  
   Chair, Senate Curriculum Committee  
Date: October 19, 2000  
Subject: Math Resolution Responses  

To help the Curriculum Committee in its discussion of Jim Harris's proposed Resolution to Raise the Standards for Mathematics at Cal Poly, I asked Bob Cichowski from Liberal Studies, Sue McBride from UCTE, Kent Morrison from the Math Department, Jim Mueller from the GE Area B/F Subcommittee, and John Harrington from the GE Committee to provide input.

Their responses are attached.

The Curriculum Committee meets today on the issue, and I will e-mail you the committee's response later this evening following the meeting.
MEMORANDUM

To: Doug Keesey, Chair, Academic Senate Curriculum Committee

From: John Harrington, Director General Education Program

Date: 10/11/00

Copies: David Conn Jim Mueller

Subject: Resolution to Raise the Standards for Mathematics at Cal Poly

In September, you asked that the General Education Committee review the Resolution to Raise the Standards for Mathematics at Cal Poly. In turn, I asked the Area B/F Committee to prepare a recommendation for the GE Committee. The GE Committee supports the attached recommendation of the Area B/F Committee.

In addition to the specific points found in the recommendation of the Area B/F Committee, the GE Committee raised the following concerns:

• As approved by the Provost and the President, the current standards have established that “. . . a full review of the GE Program should take place two years after implementation (scheduled for Fall, 2001) and that no changes should be made in the template until then.” We believe that the proposed change affects the template as approved by the Senate and the President, and that any proposed changes should await the review in 2003.

• Regardless of the timing of the review, we do not believe that there is adequate time to implement this decision by 2003, as called for in the resolution.

• A change in standards will likely affect transfer students and students who undertake either partial or area certification elsewhere. Consequently, wider consultation is needed before considering such a change.

• The Committee wanted to know whether evidence exists establishing that current graduates are not appropriately proficient in mathematics.

• The resolution will most significantly affect students from CLA. The new template already calls for CLA students to take an additional course in Area B.
MEMORANDUM

To: John Harrington, Director
   General Education

From: Jim Mueller, Chair
       GE Area B/F Subcommittee

Date: October 10, 2000

Copies: Area B/F
        Subcommittee

Subject: Resolution to Raise the Standards for Mathematics at Cal Poly

The GE Area B/F Subcommittee does not recommend approval of Jim Harris’ Resolution to Raise the Standards for Mathematics at Cal Poly. We have met with Dr. Harris to discuss his proposal, and though we feel that the goal of raising standards is laudable and worthy of pursuit, we also feel that the implications and consequences of his resolution are problematic.

At the most fundamental level, his resolution creates an implicit entrance requirement to Cal Poly in the form of a course in precalculus. While it is true that precalculus algebra is taught at the high school level, it is also true that precalculus is currently not an entrance requirement to any CSU or UC school. Clearly, most students majoring in one of the hard sciences or engineering take precalculus in high school, and if their mathematics placement scores are high enough, these students will start in Math 141 and use calculus to satisfy their GE mathematics requirement. However, not all students take precalculus in high school, and many that do have a weak background in mathematics as evidenced by poor placement scores. If these students choose non-technical majors, we feel that it is appropriate to allow Math 118 as partial fulfillment of the GE requirement in mathematics.

In particular, we feel that Math 118 is an appropriate GE mathematics course for liberal studies majors. Recent trends in elementary education in California have pushed topics in algebra into grades 5, 6, and 7, and it we feel that it is extremely important that prospective teachers to be firmly grounded in this subject. Math 118 is the appropriate course to ensure appropriate content knowledge in algebra. It should be noted that Cal Poly has one of the most rigorous math education programs in the state. At Cal Poly, students seeking a multiple subject credential (appropriate for teaching grades K-8) are required to take five courses in mathematics and/or statistics. Other schools in California require only a year of mathematics. Should the Harris resolution pass, it is likely that liberal studies program will drop one of these courses, replacing it with a "higher level" course that will not be as useful for the teachers they hope to educate.

The committee also had concern that the Harris resolution “raises the bar” to a level that may be too high. Many weaker students struggle to satisfy the Math 118 requirement,
and the proposal to add a course in mathematics at a higher level may be too severe. The resolution effectively adds another four units of mathematics to the degree programs for many students on campus.

It appears to us that Dr. Harris is attacking the wrong end of the problem. If he wants to raise standards, then his resolution should be to change the entrance requirements to Cal Poly. Doing so would send a strong message to the high schools that mathematics is important, and college-bound students need to take math every year in high school.
To: Academic Senate Executive Committee
From: Kent Morrison, Math Dept. Chair
Subject: Resolution to raise the standards for mathematics at Cal Poly

Cost of the proposal: 8000 SCU/year is reasonable using an estimate of about 2000 students taking the proposed class each year. These would be 1800 new students each year (freshmen and transfers) primarily in liberal arts and agriculture and 200 students repeating the class. Math classes like this average 30 SCU/WTU. This would require 300 WTU, which means 7.4 FTE (1 FTE = 36 WTU). At an estimated cost of $75,000 for salary and benefit the total cost would be about $555,000/year. A second way to estimate the cost is to note that total instructional payroll in mathematics is about $3,000,000 for 1500 WTU. The additional 266 WTU (an increase of 18%) at the same average cost would add $530,000 in payroll. Such a substantial increase in the size of the instructional faculty would require additional staff and operating expenses. Either way we arrive at an estimate of more than $500,000/year.

Beyond high school mathematics: The proposal treats pre-calculus (Math 118) as high school level mathematics. Much of the content of this course used to be called "college algebra," and it was commonly taught as a freshman course to engineering and science students until the 1960's when it moved to the high schools. The CSU admissions requirements do not require pre-calculus but only three years of high school mathematics, typically algebra I, geometry, algebra II.

Mathematics for future teachers: The increasing mathematical needs for teachers are for teaching algebra in grades 6, 7, and 8. The curriculum for the liberal studies major reflects that emphasis with the requirement of Math 118, 327, 328, 329.
Folks
Jim Harris has a resolution on Math requirements. He basically doesn't believe that pre-calculus algebra, statistics and 3 additional math classes is sufficient for LS or others entering the K-8 arena. We had a meeting last year (Doug called it) but he wasn't convinced.

Jim's statistics about California kids may be true but if every university asked for 5 math classes, the problem would be ameliorated. I am convinced that we produce the most well prepared candidates in the state wrt to math. I have had multiple exchanges with other LS programs and know this to be fact.

Your comments.
Bob