I. Approval of Minutes (June 1, 2000 and June 14, 2000)

II. Reports
   A. Chair’s Report – Nagel
   B. Commissioners’ Reports
   C. Advisory Committee Reports

III. Consent Items
   A. Capital Assets Subcommittee Delegation Request – Adkins
   B. Technology Advancement Group Funding of Rural Technology Program – Hum/Richardson

IV. Action Items
   A. Policy Revisions to the Policy and Procedures for the Discontinuance of Academic Degrees with Low Program Demand – Samson (15 minutes)
   B. Statewide Remedial Education Policy – Samson (15 minutes)
   C. Fiscal Year 2001-2002 CCHE Budget Request and Governing Board Recommendation – Jacobs (30 minutes)

V. Items for Discussion and Possible Action

None

VI. Written Reports for Possible Discussion
   A. Concept Papers
      (1) Master of Science (M.S.) in Engineering and Technology Management at the Colorado School of Mines – Kuepper
      (2) Bachelor of Arts (B.A.) in Special Education at Metropolitan State College of Denver – Lindner
      (3) Bachelor of Arts (B.A.) in Liberal Arts and Sciences at Metropolitan State College of Denver
   B. Degree Program Name Changes: Colorado State University and University of Southern Colorado – Samson
COLORADO COMMISSION ON HIGHER EDUCATION

June 1, 2000
Colorado Mountain College
Glenwood Springs, Colorado

M I N U T E S

Commissioners Present: Raymond T. Baker; Terrance L. Farina; David E. Greenberg; Peggy Lamm; Ralph J. Nagel Chair; Dean L. Quamme; James Stewart; and William B. Vollbracht.

Advisory Committee Present: Wayne Artis; Aaron Houston; Sandy Hume; and Representative Keith King.

Commission Staff Present: Timothy E. Foster, Executive Director; Jeanne Adkins; JoAnn Evans; James Jacobs; and Sharon Samson

I. Call to Order

The regular meeting of the Colorado Commission on Higher Education was called to order at 10 a.m. in the New Sp Center in the Calaway Building at Colorado Mountain College in Glenwood Springs, Colorado.

II. Reports

A. Chair's Report

The Chair, Commissioner Ralph Nagel, reported that Commissioners Marion Gottesfeld and Robert Hesseler were excused absent. Minutes of the May 4, 2000, were not available for approval. Action on the May minutes will take place during a teleconference meeting to be held June (date to be determined). Commissioner Nagel reported that this was his first opportunity to serve as chair of the Commission, however, he had no report.

B. Commissioners' Reports

No reports.

C. Advisory Committee Reports

Representative Keith King reported that he sponsored House Bill 1355 regarding Colorado’s need to graduate more students to meet the high demand for employees in the high technology industry, particularly electronic engineering. He worked with the American Electronics Corporation to establish a scholarship program for resident students at all levels in the student’s plan. He said that the legislation received tremendous support from the electronics industry. CCHE administer allocation of the degree programs in technology. Commissioner Nagel thanked Representative King for his efforts in support of higher education issues.

III. Consent Items

None

IV. Action Items

A. Programs of Excellence

JoAnn Evans presented the 2000 Programs of Excellence. The Program of Excellence is Colorado’s most prestigious academic honor. Each year the Commission seeks nominations of those academic programs that exemplify quality and high levels of academic performance. The designation of this honor recognizes programs that excel and demonstrate continuing commitment to outstanding performance. The award entitles each program to five years of enhancement...
The higher education governing boards nominated 35 degree programs for consideration in this year’s selection process. An external review panel, composed of noted professionals in the arts, business, engineering, health, humanities, technology, evaluated the 35 degree programs and forwarded a list of ten semi-finalists to the Commission sub-committee. The Commission sub-committee made up of Commissioners Farina, Hessler, and Lamm review semi-finalist programs and selected six programs for Commission consideration for the 2000 Programs of Excellence. The six finalist programs are:

- Western State College Biology Program
- University of Northern Colorado Monfort School Of Business Program
- Adams State College Counselor Education Program
- Community College of Denver Graphic Design Program
- University of Colorado-Colorado Springs Geography/Environmental Studies Program
- Morgan Community College Physical Therapy Assistant Program

The funding recommendation for the 2000-01 fiscal year Programs of Excellence was distributed.

**Staff Recommendation**

(1) That the Commission approve the recommendation of the sub-committee and designate the selected programs as the 2000 Programs of Excellence.

(2) That the Commission approve the funding recommendation for the 2000-01 fiscal year.

**Action:** Commissioner Greenberg moved approval of the staff recommendation. Commissioner Quamme seconded motion, and the motion carried unanimously.

Upon approval of the staff recommendation the awards were presented to the governing board representative of the recipient institutions.

**B. Proposals for New Academic Degree Programs**

Dr. Sharon Samson presented three proposals for Commission approval, noting that two degree program proposals submitted for consideration were postponed for action. CCHE staff needed additional time to resolve curriculum questions and duplication issues for the two programs, i.e., M.S. and Ph.D. in Environmental Studies submitted by University of Colorado at Boulder.

She presented recommendations supporting the approval of three undergraduate degrees:

(1) **Proposal to Offer a Bachelor of Arts in Astronomy at the University of Colorado at Boulder**

Dr. Samson stated that issues raised at the concept paper stage have been adequately addressed in the full degree proposal and outlined the elements that supported approving the degree approval request, including: (1) the strength of the faculty in the Department of Astrophysical and Planetary Sciences (APS); (2) the experience in research and graduate offerings in the department; (3) the considerable participation of APS faculty in undergraduate general education; (4) a well-defined curriculum; (5) and the level of interest in an undergraduate degree in astronomy shown by prospective students. She noted for the record that the Astronomy program is not seeking authorization for teacher licensure.

**Staff Recommendation**

That the Commission approve the request of the Board of Regents of the University of Colorado to offer a Bachelor of Arts in Astronomy at the University of Colorado at Boulder.

**Action:** Commissioner Vollbracht moved approval of the staff recommendation. Commissioner Greenberg seconded the motion
and the motion carried unanimously.

(2) Bachelor of Science in Environmental Science and Technology at Mesa State College

Dr. Samson reported that the Trustees of The State Colleges in Colorado and Mesa State College request Commiss approval to offer a B.S. in Environmental Science and Technology and discontinue the current B.S. in Environmental Restoration and Waste Management. She summarized the staff analysis of the proposal, including the enrollment graduation goals and the Trustees of The State Colleges discussion of duplication and program differentiation environmental field.

**Staff Recommendation**

That the Commission approve the request to offer a B.S. in Environmental Science and Technology at Mesa State College and discontinue the Environment Restoration and Waste Management Program currently offered at Mesa College.

**Action:** Commissioner Vollbracht moved approval of the recommendation. Commissioner Greenberg seconded the motion and the motion carried unanimously.

(3) Bachelor of Science in Environmental Studies at Western State College

Dr. Samson reported that the Trustees of The State Colleges in Colorado and Western State College request Commi approval to offer a B.S. in Environmental Studies. The aspects that support approving the degree approval request include: (1) the availability of public land in the Gunnison area to support the field experience; (2) the marketability of the baccalaureate degree documented by industry’s growing reliance on consultant researchers; and (3) the level of interest in environmental studies shown by students currently enrolled in the minor. Staff expressed a concern regarding the sequencing of the curriculum, particularly the general education courses. Staff suggest that the institution reexamine the sequencing of the general education curriculum earlier in the curriculum, particularly basic skills courses.

**Staff Recommendation**

That the Commission approve the request to offer a B.S. in Environmental Studies at Western State College.

**Action:** Commissioner Vollbracht moved approval of the staff recommendation. Commissioner Greenberg seconded the motion and the motion carried unanimously.

C. CCHE-Technology Advancement Group Program Funding for Fiscal Year 2000/2001

Ms. Adkins reported that the Colorado Advanced Technology Institute (CATI) program was transferred to CCHE on July 1, 1999, as a result of passage of HB 99-1359. This legislation folded CATI into the Colorado Commission on Higher Education and provided general direction for the Advanced Technology Program now called CCHE-Technology Advancement Group (CCHE-TAG). A Performance Audit of the Advanced Technology Program was completed in August 1999 which included recommendations concerning the direction and administration of the program.

A step-by-step process to accomplish these goals was undertaken by staff with the following objectives:

1. Create defined ways to review programs, assess their effectiveness and track program expenditures more clearly and more frequently.
2. Create additional program resources and/or redirect existing resources to continually update the TAG emphasis to focus on new technologies.
3. Create a better working relationship with industry and university partners to accomplish the legislative mission.
4. Ensure that the bulk of resources for the program were devoted to exploring and implementing new technologies with industry development that benefit Colorado residents long term.

The Commission approved the formal Program Plan in March 2000 that provides the framework for annual program review and funding. The Science and Technology Commission chaired by Commissioner Quamme created an in
evaluation system that included weighted criteria for program evaluation. Programs that did not meet the objective outlined by the legislature and the Commission’s guidelines were discontinued making $513,000 available for new research opportunities in 2001 for the institutions. This is the first time that new dollars have been available for programs.

Another audit recommendation suggested that the Commission seek non-general funds from the private sector. HB redirects 25 cents of the Tire Recycling fee be allocated for technology for a total of $600,000 next year. There will be a Request For Proposal (RFP) process and new guidelines for the program will be developed.

Commissioner Quamme reported that the TAG committee took seriously the auditor recommendation and addressed issues. The advisory committee understands the restrictions with the Tire Tap funds. The committee is excited and will come back with new proposals. The programs were aware of the issues raised by the audit and understood that legislative demands were not met.

Ms. Adkins also outlined staff’s response to the audit recommendations. Discontinued programs received funding to the end of the fiscal year and some were reconstituted as private non-profit entities. There are nine businesses which may have intellectual property return if the products succeed. If there is a return, those dollars will be reallocated to other programs.

The TAG requested the Rural Technology group to create a broad-based proposal focused specifically on how technology can be used to enhance local business development, multiuse network.

Executive Director Foster summarized that the program has grown beyond reaching a limited audience. Commissioner Quamme said that there are several organizations on the state level working on technology.

The Colorado Manufacturing competitiveness ranked low because its direction was different and did not attract participation. The accountability was not visible. The advisory committee felt continuing the program was not productive. Commissioner Quamme said the program migrated toward strictly course development. However, the company will redraft and come back with a new proposal.

Ms. Adkins reported that two pieces of the audit have not been addressed. The first is the creation of legal authority CCHE to have the nonprofit authority. That was accomplished by recent legislation (SB 61). The second was administrative costs of some of the programs.

Administrative costs of some of the programs have been addressed. Colorado Advanced Materials Institute and Colorado Advanced Photonics are heavily dependent on state resources. Both programs have been notified they must reduce administrative costs in the next year. There is currently a stronger current process for managing the funding. Year’s contracts will not be signed until the language is included. The language cannot be retroactive. There would question how future funding would be allocated.

Commissioner Vollbracht inquired about the status of the Supernet funds. Ms. Adkins responded that the supernet fund could not be transferred to the non-profit funds because there was no controlling entity for the former CATI nonprofit. SB 61 allows CCHE to establish a nonprofit. Each institution transferred a one-time $100,000 of the supernet resource into the nonprofit. The staff and the institutions have negotiated a draft intellectual property agreement. The Commission at a teleconference meeting later in June will review the agreement. The agreement will split the proceeds in excess million with the state in proportion to the investment.

Commissioner Lamm stated that since the state has not had additional dollars in the past, how will the institutions be informed? Ms. Adkins outlined the process and stated that there is a backlog of proposals that have not funded.

Commissioner Baker said that this looks like economic development. Reviewing the proposals is extremely time consuming. Ms. Adkins commented that the mission of TAG is research, not economic development. It ties research into the original research idea and not the economic development. It’s the highest risk investment. It is complimentary legislature to take this risk. Commissioner Quamme said the funding is used for proven research rather than basic
Advisory Committee member Keith King inquired about the 25 cent allocation from the tire tap fund. Ms. Adkin explained that the revolving loan fund allocations is set aside for TAG programs. Executive Foster said there are industries that are ready to work with the higher education institutions.

**Staff Recommendation**

(1) The Science and Technology Committee recommends approval of the funding totaling $2,096,955 for 12 programs as specified in the Recommended Funding table. The funding for each individual program is conditional pending successful completion of the FY 1999/2000 programs.

(2) It recommended that the Commission delegate the authority to adjust any individual program amount within the total approved amount to the Executive Director, if any funds are unused.

**Action:** Commissioner Farina moved approval of the staff recommendation (1) to approve the funding of $2,096,955 for 12 programs as specified in the Recommended Funding table. Commissioner Greenberg seconded the motion unanimously.

Commissioner Farina moved approval of staff recommendation (2) to delegate the authority to adjust any individual program amount within the total approved amount to the Executive Director, if any funds are unused. Commissioner Greenberg seconded the motion and the motion carried unanimously.

**D. Low Enrollment Program Policy and Action**

Chairman Ralph Nagel invited the governing board representatives to comment on the proposed changes to the Policy and Procedures for the Discontinuance of Low Demand Degree Programs before the staff presentation.

Dr. David Clark, Associate Vice-President of the Colorado State University system, advocated that the Commission leave the policy in place for a year before considering any changes. He expressed concern about reducing the number of exemptions from five to three for institutions with more than 5,000 students. He argued that larger schools have flexibility than smaller institutions and are better able to support low enrollment programs, particularly when they are unique programs, such as agriculture. He pointed out that reducing the number of exemptions may imply that programs close to the margin may not be wanted in the state. He asked the Commission to postpone action on the policy for one year, or at least, until the next Commission meeting to provide sufficient time to discuss the proposed changes.

Dr. Lee Halgren, Vice-President of Academic Affairs for The State Colleges, concurred with the policy goals of timely review and discontinuance of programs that no longer address market needs, but stated that he is very concerned about reducing the number of exemptions from five to three. He believes that changing the number of exemptions could stifle innovation. If the Commission decides to lower the number of exemptions for large institutions, it is critical to clarify the January 2001 effective date in the policy. He further suggested eliminating the appeals criteria listed in section 3.03 of the policy since the Commission is only accepting requests for one- and two-year extensions. He urged the Commission to allow further discussion of the policy.

Dr. Michel Dahlin, representing the University of Colorado, concurred with the need for additional time to discuss substantive issues associated with changing discontinuance procedures. She stated that CU is particularly concerned with the proposed reduction in the number of exemptions, explaining that large institutions benefit from having large and small degree programs. She encouraged allowing the institutions to be efficient by using both large and small programs and not to adopt the proposed three-exemption limit.

Responding to Commissioner Nagel’s request for a brief overview of the salient points at issue, Dr. Samson highlighted the three policy changes – change in maximum exemptions for large institutions, clarification of the governing board responsibilities as the primary decision makers, and the consequences if a governing board chooses not to act. She noted that the discontinuance policy does not stifle innovation, but allows institutions to direct resources to high priority programs by discontinuing the degree programs that are no longer market responsive. She illustrated this effect by several examples of new programs that have attracted enrollment from existing, low-demand programs. She explained that discontinuance of low demand programs has allowed institutions to direct their resources to high priority and unique programs.
that the dissonance in the system regarding this policy is partially due to the differences in roles between the Commission coordinating and planning mission – long term – and the governing boards’ managerial mission – immediate action impacts.

Responding to Commissioner Lamm’s question, the governing boards affirmed that they would have sufficient time to meet the 2001 effective date if the Commission acted in October. Commissioner Farina asked what are the implications if the Commission waited until October to reconsider the policy. Dr. Samson stated that not only is the Commission’s October agenda quite heavy but the Academic Council has a heavy policy and project load in the next three months. Scheduling the policy for Commission action before October would provide the Commission time to debate the substantive changes.

Executive Director Foster suggested that the Commission may wish to discuss the Low Demand Discontinuance Policy at its August retreat.

Commissioner Baker would like to hear recommendations directly from the members of the governing boards. emphasized the complexity the Commission faces in making this decision and would appreciate honest recommendations from the governing boards. Seconding Commissioner Baker’s position, Commissioner Lamm stated that she is interested in seeing policy language that strengthens the governing boards’ responsibility to make the politically hard decisions on low enrollment programs. She wishes to deal with the policy revisions expeditiously, but she observed that the retreat is not conducive to the type of dialogue needed.

**Staff Recommendation**

That the Commission discontinue any degree programs that the governing boards have not discontinued or exempted under their five program limit.

That the Commission approve the revisions to the Policy and Procedures for the Discontinuance of Academic Degrees with Low Program Demand.

**Action:** Commissioner Greenberg moved that the Commission continue the discussion of the Low Enrollment Policy August 2000. Commissioner Baker seconded the motion, with the understanding that the Commission will hold a meeting to act on this policy in August. Motion carried unanimously.

V. **Items for Discussion and Possible Action**

None

VI. **Written Reports for Possible Discussion**

A. **Report on Out-of-State Instruction**

The Commission accepted the report on Out-of-State Instruction. The Executive Director has approved the following out-of-state instruction.

The Trustees of The State Colleges has submitted a request for approval of a course to be delivered by Adams State College:


The Board of Regents of the University of Colorado has submitted a request for approval of a course to be delivered by the University of Colorado Health Sciences Center, School of Medicine:

*New Approaches to the Management of Peripheral Arterial Disease and Intermittent* to be delivered in Rosemont, Illinois on June 18, 2000.

The Board of Regents of the University of Colorado has submitted a request for approval of courses to be delivered by
the University of Colorado at Boulder:

*TMUS 4433 Special Studies: Study Tour in Choral Music and*

*TMUS 5534 Special Studies: Study Tour in Choral Music in Italy* to be offered in Italy from May 22-June 4, 2000.

B. **CCHE - Capital Assets Quarterly Report**

The Commission accepted the Capital Assets Quarterly Report as presented.

C. **Concept Paper:**

(1) **Bachelor of Arts in Interdisciplinary Studies at Adams State College**

The Commission accepted the concept paper submitted by the Trustees of The State Colleges for a Bachelor Interdisciplinary Studies at Adams State College.

**Action:** Commissioner Greenberg moved adjournment of the meeting. Commissioner Nagel seconded the motion, and the motion carried unanimously. The meeting adjourned at 12:00 p.m.

There will be a teleconference meeting held in June to discuss the Technology Advancement Group Program Inte Property. Date to be announced.
COLORADO COMMISSION ON HIGHER EDUCATION

June 14, 2000
Teleconference Meeting
Denver, CO

MINUTES

Commissioners Present: Raymond T. Baker; Terrance L. Farina; Marion Gottesfeld; David E. Greenberg; Robert Hess; Peggy Lamm; Ralph J. Nagel, Chair; and James Stewart.

Advisory Committee Present: Wayne Artis.

Commission Staff Present: Timothy E. Foster, Executive Director; JoAnn Evans; Rick Hum; James Jacobs; and Sha Samson.

I. Call to Order

The special teleconference meeting of the Colorado Commission on Higher Education (CCHE) was called to order at 9:00 a.m. via telephone in the CCHE Office located in the Colorado History Museum Building in Denver, Colorado. The meeting was called to order by Chair Nagel followed by roll call.

Commissioner Nagel reported that Commissioners Dean Quamme and William Vollbracht were excused absent.

II. Approval of Minutes

Commissioner Hessler moved approval of the minutes of the May 4, 2000, meeting. Commissioner Farina seconded the motion and the motion carried unanimously.

III. Action Items

A. Financial Aid Allocation

Dr. Sharon Samson introduced the proposed 2000-01 Financial Aid Allocation, indicating that it is the first step in aligning the allocation to the new policy goals and ensuring that need and merit dollars are proportional to the student population. She credited the allocation advisory committee, made up of three financial aid directors, a chief financial officer, an academic officer and two student representatives, and academic council representatives with the development of the new model that is more student-centered than the former allocation formula. The committee examined different market segments focusing on student needs.

Dr. Samson outlined the major changes in the allocation formula. Primarily, the allocation formula prorates the need-based dollars using the percent of student need calculated for Level 1 students. It directs a greater percentage of dollars to the community colleges, area vocational schools, and three four-year colleges (Adams State, Mesa State, University of Southern Colorado). To further simplify administration and reporting, dollars allocated for merit proprietary schools are being converted to the need-based program. The overall impact is an increase in dollars for this group of institutions.

Merit dollars were allocated to all institutions that report college GPA. The formula calculated the allocation based on actual tuition times 3.5 percent of the number of in-state undergraduate students. The formula for graduate merit paralleled the undergraduate formula but included in-state and out-of-state students and used 2 percent as the allocation factor. The allocation advisory committee seeks Commission direction regarding undergraduate and graduate allocation formulas specifically if the model should use a 3 percent allocation formula for undergraduate and graduate merit dollars in future years or continue to use a differentiated allocation for undergraduate and for graduate merit dollars.

Commissioner Hessler asked for clarification on the need allocation for Morgan Community College and Northeastern Junior College (NJC). Dr. Samson explained that Morgan received a significant increase in the Governor’s Opportunity Scholarship dollars and NJC’s increase came from the need-based line.
Responding to Commissioner Gottesfeld's request for a clarification of the categorical programs, Dr. Samson explained that categorical programs include the undergraduate nursing program, the Native American entitlement program at Fort Lewis, the Law/POW Dependent Grant, and the Governor’s Opportunity Scholarships. These have separate line items administrated by CCHE rather than allocated to the institutions.

In response to Commissioner Farina’s question regarding the impact of using a consistent 3 percent merit allocation, Samson stated that higher graduate tuition significantly redistributes the dollars. The greatest negative impact would be on the community colleges, which would lose $1.5 million. In prior years, the graduate merit was capped at $1 million. The formula used this year increases the proportion of merit dollars allocated to graduate students to $1.2 million. The Commission supported retaining the differentiated factor in the merit allocation.

During discussion, Commissioner Greenberg asked for the amount of the total unfunded need for the state. Dr. Samson responded that there are 63,000 students with high need enrolled in the system. To fund all need at the minimum level of $1,500 it would require $94 million to fund Level 1 students (e.g., those with family incomes less than $45,000). This year’s need-based allocation will fund one-third of the need of this group of students.

Following the Commission discussion on this point, Dr. Samson explained that the dissonance between the unfunded need and available need-based dollars may require a more aggressive approach to make the transition to a policy-driven allocation process. Since CCHE policy protects current financial aid recipients for three years, the allocation formula is phased to protect the funds that are awarded to the current recipients. If the General Assembly is as generous next year, increasing the merit budget line, the merit goals will be met in the 2001-02 without redistribution. As unfunded need illustrates, the need-based budget line is less aligned with Colorado’s need-based population. Even with increases, it may mean that the 2001-02 allocation will preserve only 80 percent of the 1999-00 financial aid allocation base to redistribute the need-based funds and adequately fund high-need student populations, primarily enrolled at the community colleges. Staff seeks Commission endorsement to protect a portion of the base rather than the whole base if necessary.

Executive Director Foster re-emphasized that if higher education receives no additional financial aid funding in 2001-02, the Commission may need to decrease funding at certain institutions. The institutions most vulnerable in this scenario are CU Boulder and CSU. The funding for Fort Lewis College, UNC, Metro State, and Western State College remain stable. The community colleges, USC, Adams State, and Mesa State are under-funded proportional to their student population. CCHE staff is committed to increasing their need-based funding regardless of the appropriation level.

Commissioner Gottesfeld was impressed with the new approach and that the allocation models includes the private proprietary schools. She noted that Colorado is one of the few states that allocate state dollars to fund proprietary schools.

There were no governing board comments.

**Staff Recommendation**

That the Commission approved the proposed allocation model, the allocations for the 2000-2001 Financial Aid (Attachment A in agenda), and the three-year transition plan.

**Action:**

Commissioner Nagel moved approval of the staff recommendation. Commissioner Gottesfeld seconded the motion and motion carried unanimously.

B. Intellectual Property for CCHE Technology Advancement Group Program Contracts

The intellectual property provision for CCHE-TAG programs must be revised from that formerly used by the Colorado Advanced Technology Institute (CATI). The former policy relinquished all intellectual property rights to the institution hosting the program with no provision for sharing the revenue such property might generate. This practice was criticized in a recent legislative audit. This former practice must be replaced by one that shares revenue between the institution and CCHE-TAG.

During the discussion Executive Director Foster recommended that the Commission select a subcommittee of three members and delegate the subcommittee with the authority to revise and approve the contract language by working with the institutions.
Chair Nagel emphasized that the revised intellectual property language must be firmly established and clearly define relationship between the institution and the Technology Advisory Group. He supported the recommendation for Commission to review the language before proceeding. Chair Nagel presented draft intellectual property language submitted by Charles Luce. The Commissioners appreciated the opportunity to review the alternative proposed opinion or the proposed Article and the specific recommendations.

It was the consensus of the Commission to establish a subcommittee to approve the language. The following Commissioners volunteered to serve on the subcommittee: Terrance Farina, Ralph Nagel, Marion Gottesfeld, Peggy Lam and Dean Quamme. This subcommittee will work with the CCHE staff to revise the language. A teleconference meeting of the subcommittee must be scheduled before the end of June to accommodate the contract deadlines. Executive Director Foster reminded the Commission that the contacts must be completed by July 1, 2000.

**Staff Recommendation**

The Commission shall delegate the approval of the concepts and language of the Intellectual Property Article, to a subcommittee of three Commissioners. It is recommended that the subcommittee allow staff to refine the specific language as needed with the universities and the Attorney General’s Office.

**Action:** Commissioner Hessler made a motion that the Commission delegate the authority to approve the concepts and language of the Intellectual Property to the five-member subcommittee (Commissioners Farina, Nagel, Gottesfeld, Lamm and Quamme) without coming back to the Commission for a vote. Commissioner Greenberg seconded the motion. The motion carried with a vote of seven (7) in favor and one (1) opposed (Gottesfeld).

**Action:** Commissioner Greenberg made a motion to adjourn the meeting. Commissioner Hessler seconded the motion and the motion carried unanimously. The teleconference meeting adjourned at 9:44 a.m.
TOPIC:  CHAIR'S REPORT

PREPARED BY:  RALPH NAGEL

This item will be a regular monthly discussion of items that he feels will be of interest to the Commission.
This item provides an opportunity for Commissioners to report on their activities of the past month.
This item provides an opportunity for Commission Advisory Committee members to report on items of interest to the Commission.
TOPIC: CAPITAL ASSETS SUBCOMMITTEE DELEGATION REQUEST

PREPARED BY: JEANNE ADKINS

I. SUMMARY

In May 2000, the Commission approved the timetable for capital project review for the coming fiscal year and guidelines for reviewing the pilot projects designated in the current Long Bill. To avoid unnecessary delays resulting from an abbreviated CCHE meeting schedule for the summer, staff is requesting the Commission delegate approval of these projects and referral to the Capital Development Committee (CDC) and Joint Budget Committee (JBC) to the four-member Capital Assets Subcommittee.

II. BACKGROUND

Several projects submitted for state capital funding in the past cycle were assessed as lacking sufficient, up-to-date information to recommend allocation of capital resources. For several projects, changing needs dictated a review of the institution’s direction on a project. In other cases, the scope of the project was an issue. As a result, the pilot program was created. The program provides for a more complete conceptual drawing plan submission to the Commission on which a final funding determination would be based.

III. STAFF ANALYSIS

Pilot projects include the Business School renovation at Adams State College, the renovation and addition to the Fort Collins High School at CSU, renovation of the Michener Library and a new academic building at UNC and a long-term planning project for the Colorado History Museum. For the first three projects, the legislature allocated first-year funding within the current Long Bill. However, that funding is restricted by footnote and may not be spent until the Commission has approved the revisions of the project plans and forwarded the revisions with recommendation to the CDC and JBC.

Only the unrestricted amounts to fund the conceptual design process may be spent by the institutions without approval by the CCHE and the legislative committees. The Commission will not meet in September and staff reviews of several projects are likely to be ready for subcommittee review prior to the October meeting.

IV. STAFF RECOMMENDATION (Motion for Commission action)

That the Commission delegate to its Capital Assets Subcommittee the authority to approve the pilot project and forward any approved projects to the CDC and JBC.
TOPIC: TECHNOLOGY ADVANCEMENT GROUP FUNDING OF RURAL TECHNOLOGY PROGRAM

PREPARED BY: RICK HUM/JEFF RICHARDSON

I. SUMMARY

A concept proposal to establish a program to build the capacity of rural Colorado to participate in the opportunities of the new economy has been received and reviewed. The TAG staff and Advisory Board find potential merit in the proposal and have requested the proposing entities to prepare a more complete written proposal. A review by the Executive Director, however, raised several issues that project proponents have been asked to re-evaluate. Timely submitting the proposal, staff review and the intervening meeting schedule for the commission present some logistical issues to approve this project.

Staff recommends the Commission delegate authority to the Executive Director to allocate up to $300,000 in TAG funds to the program should the final proposal meet program guidelines already approved by the Commission Delegation. This would avoid the issue of uncommitted resources in this program and the potential inability to carry forward project funding.

II. BACKGROUND

At the July 2000 Commission meeting, the TAG director indicated a plan to eliminate funds for the existing rural program for a variety of specific reasons. Notwithstanding this recommendation, commissioners indicated the TAG program should include programming focused on rural Colorado. A new proposal was solicited from a consortium representing all rural colleges in Colorado.

The goal of this program is to build the capacity of rural Colorado to participate in the new economy. It is timely given other state initiatives -- the MultiUse Network and the Beanpole Fund -- designed to deploy broadband telecommunications infrastructure to rural communities. The program focus is on workforce development and providing training for businesses and residents. The underlying purpose is to assure that all of Colorado benefits from the new economy, not just the populated Front Range. As such, its workforce training mission is designed to complement efforts by other state agencies to stimulate rural job creation consistent with the digital economy.

The new program would be governed by a board comprised of representatives of the 14 rural colleges, supported by local community teams. John McKay, President of Morgan Community College, will chair the board. The program would be administered through the system offices of CCCOES, under the direction of Mary Gershwin. The program includes funding for a part-time business/technology expert to assist the program and its communities in reaching program objectives. Close links with the Office of Economic Development and Science and Technology Commission to coordinate economic development with these workforce objectives are a program objective.

III. STAFF ANALYSIS

The TAG Advisory Board reviewed and approved this new proposal and brought it to the Executive Director for approval. The Executive Director indicated support for the concept contingent on several changes. Changes required include: revising the budget to direct more of the funding toward services rather than planning; reducing the budget for a coordinator; restricting funds for curriculum development (not consistent with the legislative directives), and augmenting the budget with TAG administrative funds to cover the cost of the business/technology expert.

IV. STAFF RECOMMENDATION (Motion for Commission action)

That the Commission delegate to the Executive Director authority to obligate up to $300,000 of TAG fund
support of the proposed rural program designed to build the work force capacity of rural communities participate in the new digital economy should the final proposal conform to Commission objectives.
I. SUMMARY

At the June 2000 meeting, the Commission tabled action on the proposed revisions to the Low Enrollment Program Policy (Attachment A) until the August Commission meeting.

The Academic Council had insufficient time to process the policy revisions prior to the June meeting. Since June, the Council has consulted on the policy revisions at the July Academic Council meeting and through e-mail correspondence. The Council has reached a compromise position on the revision involving exemptions for large institutions and agreed to the other proposed revisions.

The proposed revisions to the Policy and Procedures for the Discontinuance of Academic Degrees with Low Program Demand include five policy changes. In summary, the revisions (1) leave the exemption limit at five, but state the Commission preference regarding a maximum of three exemptions for large institutions, (2) strengthen the role of the governing board in assuming the primary responsibility for discontinuing programs, (3) explicitly clarify the criteria for exempting low demand degree programs (i.e., central to role and mission and student access), (4) define the appeals process to limit appeal short-term extensions for programs which the governing board is actively involved and intervention is occurring, and reaffirm that the Commission retains the ultimate responsibility if a governing board chooses not to make the final exemption selection. In addition, the policy language sets a three-year review date to ensure that the policy is achievable objectives.

The staff recommends approval of the proposed revisions to the Policy and Procedures for the Discontinuance of Academic Degrees with Low Program Demand.

II. ISSUES DISCUSSED

At the crux of the discussion are the appropriate roles for a coordinating board and the governing boards in program discontinuance. As part of the 1289 Study of Higher Education, Chapter 1 examined Colorado’s public institutions of higher education to determine whether unnecessary duplication of degree programs exists and the appropriate way for Colorado Commission on Higher Education (CCHE) to exercise its authority. CCHE holds the statutory authority for ensuring that new and existing degree programs are consistent with statutory roles and missions, meet market demand, and do not create unnecessary duplication.

In accordance with the General Assembly’s 85-1187 directives, CCHE is charged with ensuring access to public education and guarding against unnecessary duplication. It accomplishes this responsibility through its degree approval process and the annual discontinuance review. Under CCHE’s Discontinuance Policy, baccalaureate degree programs that do not graduate 10 students each year, masters’ degree programs that graduate less than three each year and doctoral degree programs that do not graduate at least one student each year are subject to discontinuance. The policy does allow for minimal number of exemptions for undergraduate degree programs.

The controversial policy issue concerns Section 4.03.02, which specifies the number of allowable exemptions for institutions. The governing boards oppose differentiating of the number of exemptions by size of institution. They contended that larger institutions had more resources available to sustain low enrollment programs than small institutions. At minimum, they advise CCHE to delay changing the exemption limit for one year since this was the first year that governing boards had an opportunity to exercise their discontinuance authority. They also recommend that the policy be as specific as possible regarding the Commission’s expectations and delete language implying that the Commission is opposed to the maximum number of short-term extensions.
Current CCHE policy allows each institution to exempt a maximum of five exemptions. As the Commission rebtn responsibilities under the 1289 study and its goal to become more market responsive in the Statewide Master Commissioners indicated that they expected small institutions to use the five exemptions as necessary, but that larbtn institutions use fewer exemptions (i.e., three or less). During the discussions at the December 1999 and April 20th Commission meetings, Commissioners proposed to limit the number of exemptions for large institutions (i.e., th undergraduaten FTE enrollment greater than 5,000) to three. From the state perspective, protecting low demand degr programs conflicts with a primary goal of Colorado’s public higher education system – to become more market responsivc The May agenda contained proposed policy revisions that mandated a three-exemption limit at large institutions (CSU, UCB, UNC, MSCD). Small institutions were not aften by the policy change and governing boards had three years to meet the new exemption limit at large institutions.

The Academic Council stated that their governing boards supported minimizing the number of exemptions, and in somc cases, wished to eliminate all low demand degree programs. They noted, however, that this process takes time and belief that a CCHE mandate would be counter-productive to the governing board efforts. To achieve the Commission’s aing governing boards’ goals, CCHE staff and Academic Council worked out a compromise. In effect, the compromise modific the policy to strengthen the governing boards’ responsibilities, eliminate the "mandate" while explicitly stating Commission’s expectations regarding large institutions’ use of exemptions, and establishes a three-year policy review i 2003.

Section 4.04.02 specifies the outcome if a governing board submits more than the allowable number of exemptions. With the new language, the Commission communicates its conviction that the governing board has to make the final deci. However, if a governing board fails to do so, the policy notifies the governing boards that the Commission intends to exercise its statutory responsibility and will determine which programs will be exempt or discontinued. Section 4.04.0 further recognizes the governing boards’ decision authority by stating that an appeal implies that the governing boar appealing the degree program’s status but will discontinue the degree program if the appeal fails.

A minor revision eliminated the mandatory waiting period between discussion and action (Section 4.04.03 and 4.04.0). Recently, several Commission policies adopted this approach to allow the Commission to focus on critical issues rather than postpone action merely to adhere policy requirements. The two-month discussion/action sequence in the Discontinuance Policy implies that the Commission may reconsider decisions when in fact it is ruling on extensions an policy appeals. While the new language allows the Commission to act at the same meeting that the appeals are dis elimination of the mandatory 30-day waiting period does not prevent the Commission from tabling a policy decisio continuing the action when needed.

The section that stated the criteria used for exemptions (Section 3.03) is modified to achieve the governing boards’ call clarity and specificity.

Previously, the Commission modified the policy language pertaining to qualified exemptions to read "that a degree program must graduate at least three graduates in the past three years to qualify as an exemption." This minor change allows governing boards additional latitude when selecting which degree programs will be exempt. The Commission adopted policy revision unanimously in April 2000.

III. STAFF RECOMMENDATION

That the Commission approve the revisions to the Policy and Procedures for the Discontinuance of Academic Degrees with Low Program Demand.

Appendix A

STATUTORY AUTHORITY

C.R.S. 23-1-107 (2) reads:

a) The commission shall establish, after consultation with the governing boards of institutions, policies and criteria for the discontinuance of academic or vocational programs. The commission shall direct the respective governing boards
institutions, including the board of regents of the university of Colorado, to discontinue an academic or vocational degree program area, as program area is defined in commission policies.

b) The governing board of a state-supported institution of higher education directed to discontinue an academic or vocational degree program area pursuant to this subsection (2) shall have not more than four years to discontinue graduate and baccalaureate programs and not more than two years to discontinue associate programs following the commission directive to phase out said program area.

c) If the commission directs the governing board of an institution to discontinue an academic or vocational degree program area, and the governing board refuses to do so, the commission may require such governing board to remit to general fund any moneys appropriated for such program area.

d) Each governing board of the state-supported institutions of higher education shall submit to the commission a describing the procedures and schedule for periodic program reviews and evaluation of each academic program at an institution consistent with the role and mission of each institution. The information to be provided to the commission include, but shall not be limited to, the procedures for using internal and external evaluators, the sequence of such reviews and the anticipated use of the evaluations.

e) Prior to the discontinuance of a program, the governing boards of state institutions of higher education are directed subject to commission approval, to develop appropriate early retirement, professional retraining, and other programs to assist faculty members who may be displaced as a result of discontinued programs.

f) The commission shall assure that each institution has an orderly process for the phase-out of the programs.
SECTION I

PART G POLICY AND PROCEDURES FOR THE DISCONTINUANCE OF ACADEMIC DEGREES WITH LOW PROGRAM DEMAND

1.00 Introduction

This policy specifies the Commission’s expectations for academic programs with low program demand, that is, those with low student enrollment and graduation. Governing boards are responsible for taking appropriate action, including program closure, for such academic degree programs. The policy does not limit the Commission's authority to act conduct other studies of academic degree programs that might result in program closure.

The policy applies to baccalaureate and graduate degree programs. It complements the other Commission policies pertain to academic degree approval, including CCHE Policy I-B: POLICY AND PROCEDURES FOR THE APPROVAL OF NEW ACADEMIC PROGRAMS IN STATE-SUPPORTED INSTITUTIONS OF HIGHER EDUCATION IN COLORADO, and CCHE Policy I-C: POLICIES AND PROCEDURES FOR THE REVIEW OF ACADEMIC PROGRAMS, and CCHE Policy I-S: POLICY AND PROCEDURES FOR THE ANNUAL FOLLOW-UP OF NEWLY APPROVED DEGREE PROGRAMS.

The policy is effective immediately upon adoption. The Commission shall review its Policy and Procedures for the Discontinuance of Academic Degree Programs with Low Program Demand in August 2003, specifically the exemption limits.

2.00 Statutory Authority

By statute, the Colorado Commission on Higher Education has the responsibility to define criteria and ensure that governing boards discontinue those academic degree programs that do not satisfy state criteria. The statute (C.R. 23-1-107 (2)) reads:

a) The commission shall establish, after consultation with the governing boards of institutions, policies and criteria for the discontinuance of academic or vocational programs. The commission shall direct the respective governing institutions, including the board of regents of the university of Colorado, to discontinue an academic or vocational degree program area, as program area is defined in commission policies.

b) The governing board of a state-supported institution of higher education directed to discontinue an academic or vocational degree program area pursuant to this subsection (2) shall have not more than four years to discontinue graduate and baccalaureate programs and not more than two years to discontinue associate programs following the commission's directive to phase out said program area.

c) If the commission directs the governing board of an institution to discontinue an academic or vocational degree program area, and the governing board refuses to do so, the commission may require such governing board to remit to the general fund any moneys appropriated for such program area.

d) Each governing board of the state-supported institutions of higher education shall submit to the commission describing the procedures and schedule for periodic program reviews and evaluation of each academic program institution consistent with the role and mission of each institution. The information to be provided to the commission shall include, but shall not be limited to, the procedures for using internal and external evaluators, the sequence of reviews, and the anticipated use of the evaluations.

e) Prior to the discontinuance of a program, the governing boards of state institutions of higher education are di
subject to commission approval, to develop appropriate early retirement, professional retraining, and other programs assist faculty members who may be displaced as a result of discontinued programs.

f) The commission shall assure that each institution has an orderly process for the phaseout of the programs.

3.00 Goals, Principles, and Terminology

3.01 Policy Goals

The goals of CCHE’s Discontinuance Policy include:

- To establish state criteria that guide the review and discontinuance of academic degree programs with low student enrollment and graduation.
- To ensure that higher education institutions have an appropriate program array that reflects state priorities and needs, specifically that the programs respond to the current market environment in Colorado.
- To reaffirm the governing boards’ statutory responsibility to discontinue degree programs that fail to meet the adopted state criteria.
- To assure that enrolled students have a reasonable opportunity to complete the degree requirements of a discontinued program.
- To foster sound academic planning by linking planning, evaluation, and budgeting decisions.

3.02 Principles

The Policy and Procedures for the Discontinuance of Academic Degree Programs With Low Program Demand is based on the following principles:

1. A degree program consists of an approved curriculum that meets academic standards, leads to an academic degree and is approved by the Colorado Commission on Higher Education.

2. The legislature specified three levels of access to degree programs: broad access to baccalaureate degree programs, limited access to masters’ degree programs, and highly selective access to doctoral degree programs.

3. The Commission is accountable to the General Assembly and the taxpayers of Colorado for wise stewardship of state resources and protecting the rights of students who pursue degree programs in the public system of higher education.

4. The governing boards are accountable to the state and the public to review degree programs regularly and discontinue those that fail to meet the state criteria.

5. An appropriate degree program array may include offering a limited number of low enrollment programs that are central to an institution’s role and mission.

3.03 Evaluation Criteria and Documentation

The Commission has established degree approval criteria, one of which requires sufficient program demand. Because the governing boards may examine low demand programs (i.e., those that exhibit nonexistent or low student demand) for possible exemption under this policy. In exemption decisions, the role of the governing boards is to protect only those programs that clearly demonstrate that student access will be substantively impacted in the State. Therefore, the governing boards shall use the following criteria for exemption decisions:

3.03.01 Centrality of the Program to the Institution’s Role and Mission. Based on clear evidence that a degree program is critical to the institution’s statutory mission.

3.03.02 Quality of Educational Experience. In this context, the success of the program’s graduates demonstrates the quality of the educational experience. A detailed, not summary, report of the program’s students showing what career
path they pursued after graduation shall substantiate this factor.

3.03.04.02 Student Access. If a student does not have access to the degree program at other institutions in Colorado cannot meet the enrolled students’ needs, including access to on-line delivery of the degree program, student access is a valid rationale for exemption. shall substantiate this factor. In the context of this policy, convenience is insufficient to justify student access.

3.03.04 Appropriate/Essential Duplication. A comparative analysis that highlights the way a program serves a distinct group of students or fulfills a distinctly different set of program goals shall substantiate this factor.

3.03.05 Contribution to Economic Development. A degree program may attract external funds to the institution and/ or state. A three-year cost-benefit analysis comparing program costs to external funds or other financial analysis shall document this factor.

3.04 Definition of Policy Terms

Academic Year is the period extending from the first day of summer term of a calendar year and ending on the last day of spring term of the succeeding year.

Central to Role and Mission means those degree programs that define an institution’s statutory role and mission without which it ceases to operate as a research university, polytechnical college, liberal arts college, or community college. Usually, degree programs central to an institution’s role and mission are those programs with the highest enrollment levels.

Compatible with Role and Mission in this policy context means those degree programs that support the institution in meeting its mission statement but are not by themselves indispensable.

Discontinuance refers to a governing board or Commission action to formally close a degree program.

Graduation Number is defined as the number of degrees conferred under a specific program name during an academic year. A student completes the graduation requirements of two different degrees will count in the graduation numbers of both degree programs.

Phase-Out Period is the time during which currently enrolled students may complete the degree graduation requirements for a discontinued program. Colorado statute limits this period to no more than four years for graduate and baccalaureate programs and no more than two years for associate degree programs. The phase-out period begins at the end of the academic year in which the discontinuance action occurs.

Program Closure is defined as the official date after which students may not enroll in the degree program and the institution may not confer a diploma bearing the program name. The official date of program closure is the last day of the degree program allowable phase-out period.

Program Need is demonstrated by student demand and market demand. Student demand, the number of students who enroll and graduate from a program, shows whether a program attracts sufficient numbers to justify its existence. Market demand, the undersupply of qualified individuals by job title, shows the significance of the program to Colorado's market environment and the value of the program to the individual student.

4.00 Process and Procedures

4.01 Governing Board Policies
By October 15, 1997, governing boards will submit to the Commission their discontinuance policies. The policies will:

- Comply with the guidelines defined in this policy;
- Identify the governing board criteria that supplement the state criteria;
- Specify the governing board's discontinuance procedures;
- Specify the institution’s responsibilities during the four-year phase-out period (Section 4.02).

The Commission may accept or ask the governing board to modify its policy. The governing boards shall resub subsequent changes to board policies for Commission acceptance.

4.01.02 Statutory Responsibilities During the Phase-Out Period

The Commission shall exercise its statutory responsibility to establish an orderly process for the phase-out of degree programs through governing board policies. The governing board policy shall specify that the institution is accountable to implement the following process as soon as the governing board or the Commission acts to close a degree program. The governing board policy may specify additional procedures according to its bylaws and procedures.

4.01.02.01 Notify all affected students and faculty members that the program has been discontinued and will phased-out and closed.

4.01.02.02 Cease admitting new or transfer students into a discontinued program and notify the admission office of this action.

4.01.02.03 Counsel students in the discontinued program into alternative programs when completion of the program prior to the final discontinuance date is not possible.

4.01.02.04 Ensure that an institution offers the required courses of the discontinued program to the greatest extent possible before the closure date so that currently enrolled students have a reasonable opportunity to complete requirements.

4.01.02.05 Implement institutional reduction-in-force plans.

4.02 Commission Identification of Degree Programs for Examination

The Commission will notify the governing boards of low demand academic degree programs, that is, those programs that fail to meet the minimum enrollment and graduation standards specified in this policy. The group of degree programs will consist of those degree programs that are under the governing board review policies and not included in the Commission’s annual follow-up of newly approved degree programs.

4.02.01 CCHE staff will identify low demand academic programs by compiling a three-year history of degree conferred and identify all degree programs that fall below the following parameters:

4.02.01.01 Baccalaureate degrees must graduate ten (10) students in the most recently reported year or a total of students in the last three years.

4.02.01.02 Masters degree programs must graduate three (3) students in the most recently reported year or a total of five (5) in the past three years.

4.02.01.03 Doctoral degree programs must graduate at least one (1) student in the most recently reported year or a total of three (3) in the last three years.

4.02.02 In November of each year CCHE staff will notify the governing boards of all degree programs that fail to meet the criteria specified in Section 4.02.01.

The Commission expects the governing boards to discontinue degree programs that fail to meet the graduation criteria for three consecutive years, unless compelling evidence exists.
4.03 Governing Board Examination and Action

The governing board will review the programs forwarded by the Commission according to its approved policies.

4.03.01 Governing Board Review

The governing board shall monitor all programs identified as low demand degree programs and intervene where necessary to assist the degree programs in meeting their program enrollment and graduation goals and the state productivity goals.

4.03.02 Governing Board Examination

The governing board shall examine the low demand degree programs that have performed below the specified productivity criteria for three consecutive years using the criteria specified in Section 3.03 of this policy.

In keeping with the Commission’s undergraduate priority, each institution may exempt no more than five (5) low-demand baccalaureate degree programs from closure. The Commission intends this exemption privilege to offer certain baccalaureate degree programs that may have low demand but are central to the institution’s role and mission or where access is not available elsewhere in the State. The exemption applies only to baccalaureate degree programs, but excludes any degree program that did not graduate at least three students in the past three years.

The exemption privilege is designed primarily to support institutions with relatively low enrollment level (i.e., less than 5,000 undergraduate FTE).

In developing this policy, the Commission has empowered the governing boards to play a central role in ensuring that all its existing degree programs are market responsive and that exemptions are used with discretion. Exercising the exemption privilege, the Commission strongly encourages governing boards to ensure that institutions limit their exemptions to three or fewer exemptions. If a governing board exempts more than three degree programs at a large institution, the Commission may review the exempted degree program data, including but not limited to, conducting a performance evaluation of the exempted degree programs and will share findings with the governing board.

A degree program carries the exemption designation until the governing board acts to remove it. As institutions adapt to the current market environment, a new academic program may supplant a degree program that once was central to an institution’s role and mission. The governing board may replace a degree program on the exemption list with a new program. However, a low-demand degree program replaced by another is subject to immediate governing board review if it does not meet the program demand criteria specified in Section 4.02.01.

4.03.03 Governing Board Action

The point of governing board action occurs during the third year that a program graduates fewer than the minimal number of students specified in this policy. The governing board will vote whether to discontinue the degree program under examination.

4.03.04 Governing Board Report

By March 31 of each year, the governing board shall inform the Commission of the degree programs it discontinued, the degree programs it exempted, and any appeals for extensions. Any low demand degree program that is not on the governing board’s discontinued, exempted or appeal list will be closed without further Commission action. If the governing board chooses not to discontinue a low demand degree program, it shall provide the Commission a summary of its position and the documentation that supports its position as specified in Section 3.03.

4.04 Action on Appeals for Extensions and Exemptions Commission Examination and Action.
At its April meeting, the Commission will review appeals filed by the governing board for low-demand degree programs that the governing board did not discontinue. It will not review the baccalaureate degree programs the governing board designated under its exemption privilege.

4.04.01 CCHE staff shall evaluate the appeals for one- or two-year extensions for low demand degree programs not discontinued by the governing boards, examining the probability that the program can meet its graduation goals in the context of the state and Commission priorities, and the governing board rationale. CCHE staff may request additional information from the governing board staff.

4.04.02 CCHE staff will prepare a recommendation. The Commission will act on discuss the staff recommendations at a Commission meeting. Prior to the Commission action, the governing board filing an appeal representing the degree programs under Commission review will have an opportunity to testify before the Commission during the discussion.

4.04.03 The Commission will act on the programs recommended for discontinuance at its next meeting. If the Commission denies an appeal, the Commission in effect is voting to discontinue the degree program. No form action by the Commission or the governing board is required to discontinue the degree program.

5.00 Implementation of Governing Board or Commission Discontinuance

Under this policy, a degree program may be closed either by governing board or Commission action. The only difference between the two actions is the formal notification process. All other guidelines apply regardless of which board initiated the action. Each discontinued program will enter a phase-out period, followed by full discontinuance.

5.01 Program Discontinuance by Governing Board Action

When a governing board discontinues a degree program, it shall notify the Commission of its action by letter and the final date it intends to confer degrees in the program. A governing board may choose to close a program sooner than the date allowed under statute, but it may not exceed the four-year statutory limitation.

It shall also notify the institution that it is responsible to implement immediately the phase-out procedures specified in statute and the governing board’s discontinuance policy.

5.02 Program Discontinuance by Commission Action

The Commission shall notify a governing board if it has discontinued a degree program. The governing board shall carry out the Commission’s decision immediately in accordance with the statutory limits.

The Commission shall notify the governing board to discontinue a degree program immediately following its a discontinue the program. The governing board shall carry out the Commission's decision according to the governing board's discontinuance policy and procedures.

5.03 Notification of Discontinuance to Other Agencies and Organizations.

The Commission shall notify the appropriate accrediting and credentialing agencies, including WICHE and the Colorado Department of Education, of discontinued degree programs.

6.00 Commission Responsibilities

6.01 Monitoring of Discontinued Degree Programs During the Phase-Out Period.
6.01.01 CCHE will monitor the enrollment data submitted to the Commission to determine if the institution is following its governing board’s policies regarding admission to discontinued programs.

6.01.02 CCHE staff will alert the governing board staff if its institutions are ignoring the governing board discontinuance policies. The governing board staff is responsible for resolving the situation, including informing institution of potential consequences for failing to follow the phase-out plan specified in policy.

6.01.03 The Commission may choose to table new degree program proposals submitted by institutions that are not in compliance with CCHE’s or a governing board’s discontinuance policies.

6.02 Monitoring of Discontinued Degree Programs After the Closure Date

6.02.01 CCHE will monitor the enrollment and graduation of students in discontinued degree programs. It will use SURDS data, submitted to the Commission and verified by the institution, to detect whether an institution is operating a discontinued program beyond its closure date.

6.02.02 If an institution operates a discontinued program beyond its closure date, the governing board is liable for the cost of the FTE generated by the discontinued program. The cost of an FTE for this policy shall be the institution's average General Fund per resident FTE cost (Format 30 Report) times the total FTE required to meet the degree requirements. The board will return this amount to the state through an enrollment adjustment in the next funding period.
TOPIC: STATEWIDE REMEDIAL EDUCATION POLICY

PREPARED BY: SHARON M. SAMSON

I. SUMMARY

This agenda item presents a new policy on remedial education -- Statewide Remedial Education Policy (Attachment A) -- that responds to the Commission’s responsibilities stated in C.R.S. 23-1-113.3. The primary goal of the policy is to ensure that new freshmen have the academic competencies that allow them to succeed in college level courses. To accomplish this goal, the policy ensures that each first-time student is assessed in English and mathematics, receives timely and appropriate information on the availability of remedial courses, is informed of the responsibility to enroll in remedial courses if necessary, and that CCHE informs each school district on the level of college preparatory graduates. CCHE consulted with the governing boards in clarifying the statutory intent and developing the policy.

Staff recommends approval of the proposed Statewide Remedial Education Policy.

II. BACKGROUND

Few issues in American higher education have attracted as much attention in recent years as college-level remediation. In many ways, remediation stands at the center of the academic challenges that confront state policymakers. If a student is inadequately prepared to enroll in college level courses, then it is difficult for these students to complete a baccalaureate degree program in four years.

As part of its comprehensive study of public higher education, the Commission examined remedial education in Colorado’s public higher education system. Chapter 7 of the House Bill 99-1289 Report 1, published January 1999, presented findings and recommendations that addressed ways that state policy could improve student success in Colorado public institutions through stronger policy in remedial education. The important findings of the study included:

- Colorado’s typical remedial education student profile is a Colorado resident, white, young, and a high school GPA lower than needed to meet admission standards. Minority students are over-represented in this group. Students are most likely to require remedial math instruction.
- While a significant number of students are enrolled in remediation, no statewide policy requires entering freshmen students to take placement tests or enroll in remedial courses if diagnosed as needing pre-college knowledge and skills. However, a recent six-year study that analyzed remedial student performance and non-remedial student performance, indicated that students who enroll in remedial courses perform as well academically as those with adequate college preparation in college-level math and English courses.
- Currently, Colorado supports remedial education at $19.8 million. More than 18,000 students were taking remedial instruction in the state, one-third of whom are recent high school graduates.

Chapter 7 concluded by recommending that:

- Colorado should require that all incoming freshmen be assessed.
- Colorado should provide strong incentives to ensure that students whose placement tests indicate a need for remediation to take those courses early in their freshman year.
- CCHE should develop a uniform way of identifying remedial enrollments and track the academic progress of students who require remediation to identify effective practices, including those delivered by technology.
- Colorado should incorporate this measure into its Quality Indicator System.
The House Bill 99-1289 Report was presented to the Senate and House Education Committees. From the legislative perspective, the key policy issues included cost, effectiveness, and institutional mission. By legislative directive, not all institutions may provide remedial instruction in Colorado. Institutions providing these services include the community colleges, Adams State College, and Mesa State College.

From these discussions, a bill was introduced that defined the roles and responsibilities of the Commission, governing boards, institutions, and students. Students strongly supported the bill and the Governor signed the bill into law in May 2000.

The proposed Statewide Remedial Education Policy developed as a result of consultation with Academic Council and the Data Advisory Committee. The policy operationalizes the statutory mandate and sets specific dates. The Data Advisory Group is developing the support data items that will assist the Commission and the governing boards in implementing the policy.

III. STAFF ANALYSIS

The key characteristics of the proposed Statewide Remedial Education Policy include:

- All degree-seeking first-time students will be assessed.
- All students who are diagnosed as needing remedial assistance will be required to enroll in remedial courses early in their freshman year (i.e., first 30 credit hours).
- Colleges will provide students with full information regarding course availability and options to meet the college entry-level competencies, including the availability at other institutions and online courses.
- The Commission will inform Colorado public high schools about the level of college readiness of their recent high school graduate.
- The Commission, in cooperation with the public universities and colleges, will report annually to the Education Committees on who enrolls, how effective remedial education is, and how much it costs.

The governing boards support adoption of this policy. If the Commission adopts the proposed Statewide Remedial Education Policy, the governing boards will ensure that policies and procedures are in place by April 1, 2001, and fully implement the assessment testing in the 2001-02 academic year.

IV. STAFF RECOMMENDATION

That the Commission approve the Statewide Remedial Education Policy.
PART E  STATEWIDE REMEDIAL EDUCATION POLICY

1.00  Introduction

This policy is designed to ensure that:

- All degree-seeking first-time students are prepared to succeed in college level courses.
- Students assessed as needing remedial instruction have accurate information regarding course availability and options to meet the college entry-level competencies.
- Colorado public high schools are informed about the level of college readiness of their recent high school graduate.

The policy applies to all state-supported institutions of higher education, including all four-year state-supported universities and colleges that admit freshmen, extension programs of the state-supported universities and colleges, junior and community colleges, and local district colleges. The governing boards and institutions of the public system of higher education in Colorado are obligated to conform to the policies set by the Commission within the authorities delegated to it by C.R.S. 23-1-113.3.

Commission directive – basic skills courses.

(1) ON OR BEFORE SEPTEMBER 1, 2000; THE COMMISSION SHALL ADOPT AND THE GOVERNING BOARDS SHALL IMPLEMENT STANDARDS AND PROCEDURES WHEREBY BASIC SKILLS COURSES, AS DEFINED IN SECTION 23-1-113 (4) (c), MAY BE OFFERED BY STATE INSTITUTIONS OF HIGHER EDUCATION PURSUANT TO THIS SECTION.

2.00  Role and Responsibilities

2.01  Commission Role and Responsibilities

2.01.01  To design and implement statewide policies for remedial education.

2.01.02  To provide the General Assembly information on the number, type, and cost of remedial education provided.

2.01.03  To develop appropriate funding policies that support the institutional roles and missions.

2.01.04  To ensure the comparability of these placement or assessment tests.

2.01.05  To ensure that each student identified as needing basic skills remedial course work is provided with written notification identifying which state institutions offer such basic skills courses and the approximate cost and relative availability of such courses, including any electronic on-line courses.

2.02  Governing Board Role and Responsibilities

2.02.01  To ensure that each degree-seeking, first-time undergraduate student enrolled at one of its institutions is assessed in English (reading and writing) and mathematics early in the freshman year.

2.02.02  To ensure that each first-time degree-seeking undergraduate student whose assessment score indicates inadequate preparation in English and mathematics has the appropriate information and opportunity to enroll in remedial skill classes.

2.02.03  To ensure that, beginning in academic year 2001-02, each degree-seeking, first-time freshman shall take placement or assessment tests in English (i.e., reading and writing) and mathematics and the institutions inform the students needing remedial instruction of the responsibility to complete the course work within the first 30 semester hours.

2.02.04  To ensure that each student identified as needing basic skills remedial course work is provided with written notification identifying which state institutions offer such basic skills courses and the approximate cost and relative availability of such courses, including any electronic on-line courses.

2.03  Institutional Role and Responsibilities

2.03.01  To specify the placement tests used to assess college readiness in English (reading and writing) and mathematics and ensure that the tests are administered as needed.
2.03.02 To inform degree-seeking students who are diagnosed as needing remedial course work of the availability of basic skills courses and advise them regarding their responsibility to complete remedial course work no later than the end of the freshman year within the first 30 semester hours matriculated as a college student).

2.03.03 To offer basic skills courses as allowed within statutory role and mission.

2.03.04 To submit data to the Commission regarding remedial students.

2.04 Student Responsibilities

2.04.01 To take the appropriate course work no later than the end of their freshman year (i.e., within the first 30 semester hours) if student is identified as needing remedial instruction.

3.00 Terminology

3.01 Basic Skills

Courses that are designed to provide instruction in academic skills or remedial courses that are necessary content preparation for college level work. By definition, basic skills courses will not count as credit for any academic degree at the institution. Vocational certificates and A.A.S. degrees are excluded from this definition of academic degrees.

3.01.01 Academic Skills

Basic skill courses that teach study skills necessary to succeed in college. Examples of such courses include Study Skills, College Survival Skills, Listening and Note Taking, How to Study Your Textbooks, and Memory and Test Taking.

3.01.02 Remedial Courses

Basic skill courses designed for students deficient in the academic competencies necessary to succeed in a regular college curriculum including:

a) Reading – Courses that focus primarily on non-technical vocabulary, word identification, and reading of everyday material. The courses focus on developing the student’s ability to recognize and comprehend discrete pieces of information, understand relations explicitly stated in a paragraph or passage, and comprehend words or phrases in context.

b) Writing – Courses that concentrate primarily on grammar, word usage, punctuation. The courses focus on the student’s ability to construct sentences with basic agreement among nouns, verbs, and pronouns in the same phrase, avoid gross errors in simple sentence structures, and logically select and order main ideas in a paragraph using appropriate transition words.

c) Mathematics – Courses that primarily cover concepts introduced in elementary algebra, geometry, and intermediate algebra. The courses focus on word problems that would most likely be solved by arithmetic, knowledge of number systems (e.g., positive and negative numbers, square root, squares, percent, ratio, and conversion of fractions to decimals), simple equations, and finding information from a graph.

3.02 College level courses.

Courses that apply to the graduation requirements of an academic degree.

3.03 Degree-Seeking Student.

An enrolled student who has declared an intent to pursue an approved degree or certificate.

3.04 First-Time Student

A student entering an institution for the first time with no previous postsecondary experience at the degree level being sought, e.g., freshman who has not previously attended a college after graduating from high school. The fact that a student may have enrolled as a high school concurrent student at any institution prior to enrolling at an institution for the first term does not exclude the student from being categorized as first-time.

4.00 Process and Procedures

4.01 Governing Board Policy Requirements and Format

4.01.01 Each governing board, in order to comply with section 2.02.01 and 2.02.02 of this policy, shall require its institutions to
develop remedial plans, standards, and procedures that:

- Specify the placement tests used to assess college entry competency in reading and writing and mathematics, the format of the assessment, the cut score, and the test’s alignment with the Commission’s adopted college entry competencies (Ready and Able) in mathematics, reading and writing using the format specified in Appendix A. If a national standardized test is used to substitute for a college placement test, the policy must also specify the same information for the national test.
- Specify the test administration policy, including dates and location or test administrator (e.g., contract with another college).
- Specify its practices for informing students regarding the availability of remedial courses, including any electronic on-line courses.
- Specify the policies and practices for determining how the students who are diagnosed as needing remedial have satisfied the remedial requirements.

4.01.02 Prior to March 1, 2001, the staff of each governing board will submit remedial plans for each institution to CCHE for review prior to taking any required action.

4.01.03 CCHE staff will review the remedial plans for comparability and the standards, and procedures for compliance with the statute. CCHE staff will certify if the assessment plans and procedures are acceptable and the consumer information is adequate. It will inform the governing board staff of its findings within 30 days of receiving the plans.

4.01.04 Each governing board will forward the final remedial plans, standards and procedures to CCHE by April 1, 2001.

4.01.05 The Commission is not required to take formal action on the plans and policies.

4.01.06 Each governing board will ensure that each institution publishes its remedial plans, including making them available on-line, on or before July 1, 2001.

4.02 Funding

Any state-supported institution of higher education with a two-year statutory role and mission may offer and receive state general fund for basic skills courses.

Any state-supported institution of higher education without a two-year role and mission is prohibited from claiming general fund support for basic skill credit hours. However, these institutions may offer basic skills courses by contracting with a Colorado community college or on a cash-funded basis, except for Metropolitan State College of Denver and the University of Colorado at Denver. Colorado statute states that the Community College of Denver is the only institution on the Auraria campus authorized to deliver basic skills courses -- for state support or for cash.

No institution of higher education may include basic skills credit hours generated by postsecondary options or fast track students in number claimed for state general fund support or include students concurrently enrolled in home schooling.

5.00 Accountability and Data Reporting

5.01 Any institution that provides basic skills courses -- whether the courses are delivered for cash or receive state support -- shall collect data regarding student performance, including data that describes the students who take basic skills courses, the school district from which said students graduated, the year in which they graduated, the basic skill areas that required remedial instruction, and the credit hours earned in remedial courses.

5.02 Beginning in academic year 2001-02, all institutions providing basic skills courses shall submit the required enrollment files to the Commission, following its prescribed data definitions and reporting dates.

5.03 The Commission shall transmit annually to the Education Committees of the Senate and the House of Representatives, the J Budget Committee, and the Department of Education an analysis of the data including:

- The number of students who take basic skills courses
- The costs of providing basic skills courses, and
- Whether students who complete said basic skill courses successfully complete the requirements for graduation.

5.04 The Commission shall disseminate the analysis to each Colorado school district and the public high schools within each complying with CCHE’s adopted Privacy Policy.

5.05 The institutions shall provide any financial information, including FTE generated by remedial courses and program costs following prescribed data definitions and formats.
## Format of Institutional Remedial Plan

<table>
<thead>
<tr>
<th>Competency Area</th>
<th>Test</th>
<th>Format</th>
<th>Number of Test Items</th>
<th>Time limit (minutes)</th>
<th>Pass / Cut Score</th>
<th>Tools</th>
<th>Alignment with College Entry-Level Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>ACT</td>
<td>MC</td>
<td>40</td>
<td>35</td>
<td>30 correct</td>
<td>None</td>
<td>Recognize and separate main points of passage (15)</td>
</tr>
<tr>
<td>Writing</td>
<td>College Essay</td>
<td>3 essays</td>
<td>120</td>
<td>Faculty scored</td>
<td>Computer</td>
<td>[same as Reading statements]</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Accuplacer</td>
<td>MC</td>
<td>35</td>
<td>50</td>
<td>Finish test at Intermediate Algebra level</td>
<td>Calculator</td>
<td>[same as Reading]</td>
</tr>
</tbody>
</table>

- **Reading**
  - **ACT** MC, 40 items, 35 minutes, 30 correct, None
  - *Tools: Alignment with College Entry-Level Competencies*
    - Recognize and separate main points of passage (15)
- **Writing**
  - College Essay, 3 essays, 120 minutes, Faculty scored, Computer
    - [same as Reading statements]
- **Mathematics**
  - Accuplacer MC, 35 items, 50 minutes, Finish test at Intermediate Algebra level, Calculator
    - [same as Reading]
TOPIC: FISCAL YEAR 2001-2002 CCHE BUDGET REQUEST AND GOVERNING BOARD RECOMMENDATION

PREPARED BY: JAMES JACOBS AND KATHLEEN VON ACHEN

I. SUMMARY

Each year CCHE submits a budget recommendation to the Governor’s Office of State Planning and Budgeting reviewed – and modified - by OSPB, it becomes part of the Governor’s Budget. This budget (FY 2001-2002) shown in Table 1, is then submitted to the Colorado General Assembly and is analyzed by the Joint Budget Committee. The JBC presents its budget, known as the Long Bill, to the full legislature for final action a few weeks before the session ends. CCHE has requested a 6 percent increase in general fund support.

II. BACKGROUND

In developing the budget for FY 2002, the CCHE staff was charged by a footnote in the Long Bill (HB 00-1451) to include specific items in its budget request. The footnote stated:

For the FY 2001-2002 budget request, the Colorado Commission on Higher Education is directed to submit a budget request representing all functions performed by the Governing Boards and Local District Junior Colleges. This request should include the independent Colorado State University agencies and the various occupational education programs under the Colorado Community College and Occupational Education System. In recognition of the General Fund appropriation limitation, the Commission is directed to limit the total General Fund increase requested to no more than 6 percent.

Until last year governing boards received additional funds based upon enrollment and inflationary changes. For FY 2001, performance funding became a significant element of the budget process for higher education. For recommendation by the Commission, the General Assembly adopted performance funding as a major element of overall funding system for higher education in Colorado.

CCHE is requesting a 6 percent general fund increase. Funds for the governing boards and related elements would total $780.7 million. CCHE is requesting $16.8 million to be distributed under the performance funding system. This is an increase over the $12.6 million allocated by the General Assembly for the current budget year. There will be indicators this year, one more than last year. Enrollment funding increases are currently anticipated to cost $8.1 million, which will be revised when fall and winter enrollment estimates are received.

Inflation increases for CU’s Health Sciences Center and for the three CSU agencies are projected to total $3.4 million. Other increases include: $702,952 for the pharmacy program at UCHSC and $937,619 for the occupational and vocational education programs under the community college system. It also includes an increase of $565,000 for state forest, plant research and cooperative extension activities associated with the CSU agencies.

The request also includes a cash fund increase request by CCHE. This includes tuition and instructional fees. Last year OSPB recommended a tuition differential for non-resident students and the General Assembly set the increases for resident students at 2.9 percent and for non-resident students at 4.0 percent. The CCHE request is based upon tuition increases of 3.2 percent - inflation – for both residents and non-residents. If non-residents were to pay 4 percent, an additional $2.2 million would be received. CU is proposing various rate adjustments at UCB, UCD and UCCS that would total up to $2.7 million in increased spending authority. If the cash buydown is accepted, spending authority would be reduced.
Three new initiatives are shown in Table 2. They include $500,000 for a teacher loan forgiveness program that will be administered jointly by the CCHE and the Colorado Student Obligation Bond Authority (CSOBA). This will help recruit teachers in "hard-to-staff" school districts of the state. CSOBA is working on contributing a greater sum to this effort. A second initiative seeks nearly $5 million for tuition buydowns for the six rural community colleges, three urban community colleges and two state colleges. This will help to encourage greater enrollment patterns at the schools through lower tuition. These amounts and the actual buydown specifics will be determined by the Commission this fall after we receive the results of the pricing study. A CCHE request of nearly $1 million would be used to begin differentiating between the amount of support for undergraduate students vs. graduate students. The million will be used specifically to increase general fund support for graduate students. CCHE will continue to address the differences in undergraduate and graduate student funding during the upcoming years.

The breakdown of financial aid is detailed in Table 3. The overall request seeks an additional $7.2 million, comprised of the following: need-based increase of $3 million, merit-based funding increase of $1 million and a $2.2 million increase in the Governor’s Opportunity Scholarship (GOS). This would be the third year of a four-year phase-in for the GOS program, which offers the chance at higher education to students who would otherwise not have the opportunity. The request also includes an increase for nursing scholarships and this will address shortages in the nursing profession. Financial aid would reach nearly $86 million. Nearly 90 percent of the financial aid funds students attending the Colorado public higher education system.

The CCHE office administration operating budget recommendation is based upon inflation factors and salary increases set by the Office of State Planning and Budgeting. All departments of state government use these inflation factors. CCHE administration expenses in the request total $6.5 million for FY 2002.

III. STAFF ANALYSIS

The performance funding system has ushered in a new method of allocating state dollars for higher education. Along with increases in financial aid, this budget seeks greater productivity by universities and colleges, greater access to higher education by Colorado citizens and greater accountability by institutions and students.

IV. STAFF RECOMMENDATION

That the Commission adopt the budget recommendation for the governing boards and the request for the CCHE budget.

Appendix A

STATUTORY AUTHORITY

23-1-105 (2) The commission shall make annual statewide funding recommendations, after consultation with governing boards of institutions, for the state-supported institutions of higher education to the general assembly and the governor. In making its recommendations, the commission shall consider each governing board’s and each institution’s level of achievement of the statewide expectations and goals specified in section 23-1-104, as measured by data collected through the quality indicator system established in section 23-13-105.
### FISCAL YEAR 2001-2002 BUDGET INCREASE RECOMMENDATION

**GENERAL FUND**

<table>
<thead>
<tr>
<th>Description</th>
<th>FY 2000-2001</th>
<th>FY 2001-2002</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INCREASE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrollment</td>
<td>$10,174,808</td>
<td>$8,138,981</td>
</tr>
<tr>
<td>CPI for UCHSC and CSU Agencies</td>
<td>3,002,066</td>
<td>3,408,690</td>
</tr>
<tr>
<td>Inflation</td>
<td>2,350,000</td>
<td>-</td>
</tr>
<tr>
<td>Gov. Board - Performance Funding</td>
<td>12,651,263</td>
<td>16,784,019</td>
</tr>
<tr>
<td><strong>Governing Board - Subtotal</strong></td>
<td>$28,178,137</td>
<td>$28,331,690</td>
</tr>
<tr>
<td>Programs of Excellence</td>
<td>380,529</td>
<td>394,639</td>
</tr>
<tr>
<td>Financial Aid, includes GOS</td>
<td>5,547,191</td>
<td>7,192,684</td>
</tr>
<tr>
<td>Rural Access</td>
<td>800,000</td>
<td>-</td>
</tr>
<tr>
<td>Teacher Encouragement Fund</td>
<td>-</td>
<td>500,000</td>
</tr>
<tr>
<td>Rural/Urban Tuition Buydown</td>
<td>-</td>
<td>4,957,200</td>
</tr>
<tr>
<td>Graduate Student Support</td>
<td>-</td>
<td>958,125</td>
</tr>
<tr>
<td>PharmD UCHSC</td>
<td>640,554</td>
<td>702,952</td>
</tr>
<tr>
<td>Division of Occ. Ed. Area Vocational Schools</td>
<td>825,769</td>
<td>937,619</td>
</tr>
<tr>
<td>CSU Vet. Med.</td>
<td>313,500</td>
<td>-</td>
</tr>
<tr>
<td>CSU Agencies Increases</td>
<td>-</td>
<td>565,000</td>
</tr>
<tr>
<td>Subtotal</td>
<td>8,507,543</td>
<td>16,208,219</td>
</tr>
<tr>
<td>Adjustments (JBC and other)</td>
<td>(1,372,394)</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$35,313,286</td>
<td>$44,539,909</td>
</tr>
<tr>
<td>*CCHE web-based consumer guide</td>
<td>-</td>
<td>$175,000</td>
</tr>
<tr>
<td><strong>CASH FUNDS</strong></td>
<td>$714,471,354</td>
<td>$746,975,602</td>
</tr>
<tr>
<td>(Tuition, instructional fees)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**NOTE:** Some figures subject to change when new student FTE totals are recalculated.

- CCHE Cash Fund Increase Request at 3.2% res., 3.2% non-res. - $30,304,708
- Additional, if non-resident set at 4.0% - $2,199,540
- Additional, with CU rate adjustments, UCB, UCD, UCCS up to: - $2,761,154
- Cash fund with tuition buydown, exc. CU - $20,390,308
Cash fund with tuition buydown, exc. CU $20,390,308
## GENERAL FUND SUPPORT FOR GOVERNING BOARD AND RELATED ELEMENTS OF HIGHER EDUCATION, FY 00, 01 AND 2002 REQUEST

<table>
<thead>
<tr>
<th></th>
<th>FY 2000</th>
<th>FY 2001</th>
<th>Percent</th>
<th>FY 2002</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEPARTMENT BASE</td>
<td>$700,852,662</td>
<td>$742,331,817</td>
<td>6%</td>
<td>$786,871,726</td>
<td>6%</td>
</tr>
<tr>
<td>Governing Board/Related</td>
<td>$700,852,662</td>
<td>$736,165,948</td>
<td>5%</td>
<td>$780,705,858</td>
<td>6%</td>
</tr>
<tr>
<td>Governing Boards</td>
<td>597,018,365</td>
<td>623,818,108</td>
<td>4%</td>
<td>652,149,799</td>
<td>5%</td>
</tr>
<tr>
<td>Financial Aid</td>
<td>73,012,073</td>
<td>78,559,264</td>
<td>8%</td>
<td>85,751,948</td>
<td>9%</td>
</tr>
<tr>
<td>Occupational/Voc. Ed.</td>
<td>28,474,853</td>
<td>29,300,622</td>
<td>3%</td>
<td>30,238,241</td>
<td>3%</td>
</tr>
<tr>
<td>Rural Access</td>
<td>-</td>
<td>800,000</td>
<td>0%</td>
<td>800,000</td>
<td>0%</td>
</tr>
<tr>
<td>Vet. Med.</td>
<td>604,500</td>
<td>918,000</td>
<td>52%</td>
<td>918,000</td>
<td>0%</td>
</tr>
<tr>
<td>Pharm.D.</td>
<td>1,240,627</td>
<td>1,887,181</td>
<td>52%</td>
<td>2,590,133</td>
<td>37%</td>
</tr>
<tr>
<td>Programs of Excellence</td>
<td>502,244</td>
<td>882,773</td>
<td>76%</td>
<td>1,277,412</td>
<td>43%</td>
</tr>
<tr>
<td>Teacher Encouragement Fund</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>500,000</td>
<td>0%</td>
</tr>
<tr>
<td>Rural/Urban Tuition Buydown</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4,957,200</td>
<td>-</td>
</tr>
<tr>
<td>Graduate Student Support</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>958,125</td>
<td>-</td>
</tr>
<tr>
<td>CSU Agencies Increase</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>565,000</td>
<td>-</td>
</tr>
</tbody>
</table>

NOTE: Figures subject to change as new student FTE totals are inputted during budgetary process.

CCHE, 8/9/00
### CCHE FINANCIAL AID GENERAL FUND REQUEST, FY 2002

<table>
<thead>
<tr>
<th></th>
<th>FY 2001</th>
<th>FY 2002</th>
<th>Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appropriation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need</td>
<td>$38,399,077</td>
<td>41,413,452</td>
<td>$3,014,375</td>
<td>7.9%</td>
</tr>
<tr>
<td>GOS</td>
<td>3,800,000</td>
<td>6,000,000</td>
<td>2,200,000</td>
<td>57.9%</td>
</tr>
<tr>
<td>Merit</td>
<td>14,371,810</td>
<td>15,377,837</td>
<td>1,006,027</td>
<td>7.0%</td>
</tr>
<tr>
<td>Work-study</td>
<td>14,811,367</td>
<td>15,329,765</td>
<td>518,398</td>
<td>3.5%</td>
</tr>
<tr>
<td>Fed. Match</td>
<td>2,076,350</td>
<td>2,076,350</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Law/POW</td>
<td>108,021</td>
<td>108,021</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Native American/Other</td>
<td>4,753,839</td>
<td>4,946,523</td>
<td>192,684</td>
<td>4.1%</td>
</tr>
<tr>
<td>Nursing Scholarships</td>
<td>238,800</td>
<td>500,000</td>
<td>261,200</td>
<td>109.4%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$78,559,264</td>
<td>$85,751,948</td>
<td>$7,192,684</td>
<td>9.2%</td>
</tr>
</tbody>
</table>

CCHE, 8/9/00
Colorado Commission on Higher Education (CCHE)
August 9, 2000
Agenda Item VI, A

TOPIC: Concept Papers

PREPARED BY: William G. Kuepper

I. SUMMARY

This agenda item presents the concept papers submitted to the Commission during the past month, including:

- B.A. in Liberal Arts and Sciences at Metropolitan State College of Denver
- B.A. in Special Education at Metropolitan State College of Denver
- M.S. in Engineering and Technology Management at Colorado School of Mines

This report includes a summary of the issues identified by CCHE staff and a copy of the concept paper. No action required of the Commission at this time, but if the Commission wishes to have additional issues addressed or questions answered in the full proposal, these can be added to those in the staff report.

II. Background

Approval by the Commission of a new degree program proposal is a two-stage process. The governing boards submit concept paper to the Commission that provides an opportunity for the Commission to identify potential state issues prior to developing the full proposal. In contrast, the full proposal includes details about curriculum, financing, cap construction needs, and other implementation details.

Stage 1: Concept Paper

Before an institution develops a full proposal, the governing board or its staff shall submit a short concept paper to CCHE that outlines the proposed program goals, the basic design of the program, the market it plans to serve, and reasons why the program is appropriate for the institution and its role and mission. CCHE policy does not require governing board to approve the concept paper.

After the Commission staff reviews the concept paper, a staff member meets with representatives of the governing board to discuss issues and concerns related to the proposed degree. The staff presents the issues that need to be addressed in the full degree program proposal. A concept paper may be submitted by the governing board at any time and may included on any Commission agenda.

Stage 2: Full Degree Proposal

The full proposal for a new degree program reaches the Commission only after undergoing review by, and receiving approval from, the governing board. The request for new degree approval must include:

- A complete degree program proposal as defined by the governing board policy.
- The institution’s responses to the peer review comments.
- Tables of enrollment projections, physical capacity estimates, and projected expense and revenue estimates.
- An analysis by the governing board of the potential quality, capacity, and cost-effectiveness of the proposed degree program.
- The governing board’s response to the issues identified in the Commission’s review of the concept paper.

In addition, graduate degree programs require review by an external consultant. The Commission staff selects and contacts the external consultant; the governing board staff reviews the list of potential reviewers.

Once the governing board approves a proposal, the Commission staff prepares an analysis of the proposal, an institutional profile giving additional context for the institution’s capacity and market demand, and a recommendat
institutional profile giving additional context for the institution’s capacity and market demand, and a recommendation based on the statutory criteria.

The Commission only considers degree proposals at its January or June meetings. This provides the Commission opportunity to examine the proposals in the context of statewide need.
I. BACKGROUND

The Colorado School of Mines has submitted a concept paper for a Master of Science (M.S.) degree in Engineering and Technology Management. The proposed program would be designed to "provide students with a thorough knowledge of (1) engineering management, the science of planning, organizing, allocating resources, and directing and coordinating activities that have an engineering component, and (2) technology management, the awareness and appreciation of alternative strategies for managing global technology development, acquisition and commercialization." An engineering or technology manager, would "possess both an ability to apply engineering principles and a skill in organizing and directing technical projects and people in technical jobs." The program would be open to recent engineering and applied science graduates as well as professional engineers at mid-career.

The curriculum is being developed after a review of several "premier" programs at institutions such as Stanford University, Massachusetts Institute of Technology, and Rensselaer Polytechnic Institute. The degree, a course-work only program, would require the completion of 36 credits, 21 of which would be in the Division of Economics and Business, where the program would be housed. A minimum of nine additional credits would be in one of six areas of concentration and the remaining six taken as electives. The curriculum is described in the concept paper as a collaborative effort among several departments both in "content development and team-teaching" of courses. The program can be completed in three semesters.

The concept paper notes that most resources necessary to offer the degree are available at the institution due to the Division of Economics and Business already offering M.S. and Ph.D. programs. The proposed program is intended to begin in fall 2001 with initial enrollment projected at 20 students, increasing to 50 in five years.

The Colorado School of Mines is a specialized baccalaureate and graduate research institution with a "unique mission in energy, mineral, and material science and engineering and associated engineering and science fields." While the proposed program is not an engineering or applied science degree, the CSM perceives technical management as an essential, engineering-related degree and an appropriate addition to the training of engineers at the institution.

The concept paper notes that master’s level training in engineering management is offered at CU-Boulder, CU-Denver, and at the University of Denver, and notes that those programs are aimed at the mid-career engineer. The proposed program, in contrast, would also admit recent graduates, and permit seniors at CSM to concurrently enroll in pre-courses. According to the concept paper, none of the three existing programs include technology management.

II. ISSUES TO BE ADDRESSED IN PROPOSAL

After discussions between Commission staff and representatives of the governing board and the institution, it was agreed that institutional mission does not need to be addressed further than already done in the concept paper. It was further agreed that the following would be included in the full proposal:

1. A clear distinction between engineering management and technology management, and how the differences are reflected in the curriculum.
2. Why the proposed degree would be a M.S. rather than a Master of Engineering (M.E.) even though it is designed as a course-only degree program.
3. The characteristics of the proposed program which would distinguish it from, and make it complementary.
5. The characteristics of the proposed program which would distinguish it from, and make it complementary to, existing programs in engineering management in Colorado.
4. Why new graduates in engineering and applied science will be admitted to, and can benefit from, the program.
5. Who the clientele for the program will be, and evidence to support the enrollment projections of 20 students at initiation of the program and 50 at full implementation.
6. Further discussion of faculty resources available for the program, including an explanation of the statement in the concept paper that a "near-critical mass of faculty resources" (is available) to begin the program.
7. How the proposed program will meet identifiable needs of the modern, technologically oriented marketplace.

III. INFORMING THE GOVERNING BOARD

Following this meeting, the Commission shall inform the governing board about the above matters, and any additional issues that the Commission may raise about the proposed Master of Science (M.S.) in Engineering and Technology Management at the Colorado School of Mines.
COLORADO SCHOOL OF MINES
Division of Economics and Business

CONCEPT PAPER

M.S. Degree – Engineering and Technology Management

Michael R. Walls
Roderick G. Eggert

Division of Economics & Business
Colorado School of Mines
Golden, Colorado 80401
May 11, 2000

Introduction

Over the last few months there has been considerable discussion within the CSM community and with our industry partners about developing a new M.S. degree in engineering and technology management. The Division of Economics & Business feels the time is appropriate to propose and develop the planning process forward for developing such a graduate degree. This "concept paper" provides a framework for discussing the development of a Master of Science Degree in Engineering and Technology Management in the Division of Economics and Business at the Colorado School of Mines.

This concept paper is organized as follows. First, we discuss the motivation behind a new M.S. degree and provide a general assessment with regard to the market needs for this type of program at CSM. We then describe the proposed curriculum and discuss how this curriculum fits with our three defined target markets for potential participants in the degree program: (1) undergraduate engineering and applied science students at CSM interested in a 5-year B.S. in engineering and M.S. in engineering and technology management program, (2) recent engineering graduates from other universities, and (3) mid-career professionals desiring to enhance their managerial and technical skills. We conclude by examining some of the critical issues associated with a comprehensive evaluation and feasibility analysis of proposed new graduate degree programs.

Motivation and Market Needs

The American Society of Engineering Management (ASEM) recently stated that "in an increasingly complex and technically based society:

- The ability to manage and administer large technical engineering and research projects and budgets will continue to challenge engineering management skills;
- That approximately two-thirds of all engineers were spending a substantial portion of their professional careers as managers;
- That the management of technology required improved management processes; and
- That a career path that places engineers in management must be supported by engineering management education and organizations that strive to develop and enhance management skills."

This statement by ASEM summarizes the importance of engineering and technology management to engineers and managers in a rapidly evolving business world. Moreover, it points to the critical importance of integrating education in engineering and technology management with the technical components of engineering education at universities such as the Colorado School of Mines.
The Colorado School of Mines is a small, high-quality institution specializing in engineering and applied science. In general, CSM’s engineering students are highly sought after for their technical and engineering expertise. Corporate America, however, has a growing need for engineers who also possess the required management skills and knowledge to effectively function in a highly competitive global economy and international business arena. This "new economy" is one characterized by an increasingly high level of technology. Though technically competent, many CSM graduates do not have the managerial skills needed to function effectively in this new and evolving marketplace. The proposed M.S. Degree in Engineering and Technology Management is designed to enhance students' educational experiences by providing them with this set of important management skills.

The M.S. Degree in Engineering and Technology Management (ETM Program) is designed to provide the students with a thorough knowledge of (1) engineering management, the science of planning, organizing, allocating resources, and directing and controlling activities that have an engineering component and (2) technology management, the awareness and appreciation of alternative strategies for managing global technology development, acquisition and commercialization. Engineering and technology managers are distinguished from other managers in that they possess both an ability to apply engineering principles and a skill in organizing and directing technical projects and people in technical jobs.

A special feature of engineering and technology management is its close association with specialties such as computer science, operations research, mathematical science, business administration, and engineering. These disciplines represent the core foundation of higher education at CSM and the Division of Economics & Business. In this regard, the proposed ETM program provides a natural fit, as well as an enhancement, to the Division and CSM’s ultimate educational mission. Our intent in developing this graduate degree program is to provide an educational experience that develops technical and leadership skills that ultimately enable our graduates to meet the challenges of a management career in an increasingly technological business world.

The purpose of the proposed ETM graduate degree is to serve: (1) engineering students currently on track to receive a B.S. in engineering or applied science at CSM with strong interests in acquiring the managerial skill set to complement their technical skills; (2) recent engineering and applied science graduates from other universities desiring a set of managerial skills in a high-quality engineering and technology management program; and (3) professional engineers in mid-career (5-12 years post B.S. degree) who are called on to exercise managerial skills that often have not been fully developed. In addition, the ETM program has a larger purpose – to serve the Colorado industrial community through the development of engineering and technology management skills in one comprehensive program.

Proposed Curriculum

The ETM Program objectives are to offer a curriculum that prepares students to manage technology development and innovation, as well as to provide the fundamental skill set associated with project management – all within the framework of technology-intensive organizations. Thus the curriculum is designed to be interdisciplinary in nature with collaboration among other departments across the CSM campus. This collaboration would be in the form of both content development and team-teaching efforts to facilitate a true inter-disciplinary approach to education. A special feature of Engineering and Technology Management is its close association with other specialties such as computer science, mathematics, telecommunications, business administration, statistics, and operations research. Graduate students enrolled in the ETM Program would have the opportunity to take a combination of courses from these diverse areas depending upon their specific interests.

All students admitted into the ETM Program would be required to have an undergraduate degree in engineering or applied science from an accredited higher education institution or be enrolled in one of the engineering and applied science degree programs at CSM. To earn the M.S. degree in Engineering and Technology Management, students would be required to take 36 semester hours of coursework. The ETM Program will have 21 hours of core courses required of all students:

**Engineering Economics**
– Time value of money and concepts of present worth, future worth, annual worth, rate of return and break-even analysis are applied to after-tax economic analysis of mineral petroleum and general
break even analysis are applied to after tax economic analysis of mineral, petroleum and general investments. Related topics emphasize proper handling of (1) inflation and escalation, (2) leverage (borrowed money), (3) risk adjustment of analyses using expected value concepts, and (4) mutually exclusive alternative analyses and service producing alternatives.

**Industrial Accounting**
– Concepts from both financial and managerial accounting. Preparation and interpretation of financial statements and the use of this financial information in evaluation and control of the organization. Managerial concepts include the use of accounting information in the development and implementation of a successful global corporate strategy, and how control systems enhance the planning process.

**Managerial Economics**
– Designed to provide an understanding of the macro- and micro-economic forces, both domestic and international, that influence management decisions and ultimately corporate performance. Macro issues such as interest rates, economic policy, business cycles, and the financial system would be covered. Issues that are micro in nature include input demand and supply, industry factors, market structure and externalities.

**Management of Technology**
– This course is designed to provide an awareness and appreciation of alternative strategies for managing global technology development, acquisition and commercialization. The course is designed to also provide an understanding of the sources of technology-based synergies and technological leverage. Course content emphasizes methodologies for choosing product-market combinations in light of their evolving technological requirements and deciding on generic strategies for different technology-based businesses.

**Introduction to Operations Research**
– This course provides an introduction to selected methods of management science and operations research applied to operations, management, and planning functions in the manufacturing and other technology-intensive industries. Emphasis will be on economic modeling, production scheduling, inventory control, supply-chain management, production planning, project planning, and capital budgeting. There will be an introduction to various modeling approaches, such as linear programming, Markov chains, network flows, integer programming, and geometric (nonlinear) modeling, immediately applicable in the workplace.

**Corporate Finance and Administration**
– Introduction to the fundamentals of corporate finance as they pertain to the valuation of investments, firms, and the securities they issue. Included are the relevant theories associated with capital budgeting, financing decisions, and dividend policy. This course provides an in-depth study of the theory and practice of corporate financial management including a study of the firm's objectives, investment decisions, long-term financing decisions, and working capital management.

**Engineering and Technology Management Capstone** – This course emphasizes the application of integrated organizational planning within the technical function of the industrial enterprise. It would focus on achieving the correct match between organizational strategies and structures to maximize the competitive power of technology. This is a hands-on or project-related course with the proposed course delivery intended as a team-teaching approach with faculty from other departments on the CSM campus.

Of the five remaining courses (15 semester hours) in the ETM curriculum, students would take three courses in a specific area of concentration, including: (1) engineering, (2) quantitative business methods/operations research, (3) computer science, (4) mathematics, (5) statistics, and (6) economics. Students would select two additional elective courses from one or more of the areas defined above.

CSM undergraduate students in engineering could customize their program to meet the joint needs of their engineering studies as well as the requirements of the ETM Program. In addition, CSM engineering students admitted to the ETM Program would have the opportunity to take graduate level ETM courses during their senior year at CSM. This accommodation would allow CSM engineering students to complete the M.S. in Engineering and Technology
Management with one additional year of study at CSM, thus completing both a B.S. in an engineering and applied science field and a M.S. in Engineering and Technology Management in five years. Recent graduates from other universities and mid-career professionals who enroll in the ETM Program could expect to complete the degree requirements in three semesters at CSM. This completion schedule assumes a 12-hour course load (4 courses) per semester.

During the initial phases of the ETM Program we expect that 60-70% of the participants would originate from CSM’s current undergraduate engineering and applied science undergraduates. We anticipate that the remaining portion of participants would be recent graduates from other universities and mid-career professionals returning to the university to develop their managerial skills for career advancement and to enhance and modernize their technical and engineering skills.

Critical Implementation Issues

In this section we examine some of the critical issues associated with a comprehensive evaluation and feasibility analysis of proposed new graduate degree programs.

1. Will the program attract sufficient enrollment to justify the support needed to start and maintain it?

   As discussed earlier in this document, the target markets for this program consist of (1) existing undergraduate engineering majors at CSM who wish to enhance their technical degree with the managerial components of the ETM Program, (2) recent engineering graduates from other universities who desire a set of managerial skills in a high-quality engineering and technology management program, and (3) existing mid-career engineering professionals called upon to exercise managerial skills that often have not been fully developed. We anticipate that the first class in the new ETM Program will generate approximately 20 students. We also estimate that the number of students will steadily increase in the first five years of the program reaching a steady state in the fifth year of approximately 50 new students enrolling in the program each year.

   In terms of the cost of starting this program, it is important to note that a number of the courses currently offered in the Division of Economics and Business would be utilized in this program. Of the core courses, those are Management of Technology, Introduction to Operations Research, and Corporate Finance and Administration. In addition, the Division has a number of existing courses in the quantitative business methods/OR area of concentration which are well suited for the ETM Program. This is also true for other areas of concentration that the ETM student may select across the CSM campus.

2. Does the proposed program support the institution’s role and mission?

   As stated in the Colorado Revised Statutes, Section 23-41-105, CSM has a unique mission with regard to "... engineering and associated engineering and science fields." The M.S. in Engineering and Technology Management proposed here seeks to enhance and strengthen CSM’s commitment to that unique mission. In our increasingly complex and technically based society, engineering and technology management education has become a compelling issue. To more fully meet CSM’s stated mission and to demonstrate a commitment to complete engineering education it is important that the university provide the managerial expertise to complement its established technical reputation. The proposed ETM Program strives to integrate engineering and technology management education with the current technical components of engineering education at CSM.

3. What will be done to ensure a quality educational experience?

   The core courses are similar to those in highly rated engineering and technology management programs nationwide. Premier engineering management and technology management programs at Stanford, MIT, RPI, SMU and other schools have been closely scrutinized to provide a general framework for the design of the CSM program. The core courses provide the fundamental theories of management, management science and finance, as well as the analytical and decision making skills to enhance a student's productivity in the workplace. The areas of concentration and the electives provide the student breadth and depth of knowledge in his or her preferred area of interest. Once the program is in place, we will assess student outcomes through a comprehensive assessment program similar to those in place already for other degree programs.
program similar to those in place already for other degree programs.

4. *Does the institution have the capacity to offer a quality program efficiently?*

Most of the resources necessary to begin a graduate program in Engineering and Technology Management – staff, facilities, and library holdings – are in place already. This is the result of existing M.S. and Ph.D. programs in the Division of Economics and Business. There are currently 12 full-time faculty members in the Division of Economics and Business that represent a near-critical mass of faculty resources to begin the new program. The mix of skills and expertise held by the current faculty should enable the Division to begin the first phases of a new program in engineering and technology management. In addition, given the interdisciplinary nature of the program, the sharing of resources across campus provides an even more effective use of the existing university resources.

As the program grows over time, we would expect that our needs also would grow. We anticipate that one new faculty member in the Division would be required in the early phases of the Program and that an additional two faculty members would need to be added by the fifth year of the Program, based on our estimates of enrollments.

5. *Would this program duplicate existing programs in the State?*

A review of the existing programs in the state suggests that the ETM Program as proposed does not duplicate any other program in the state. Currently, Colorado State University and the University of Northern Colorado do not have any graduate degree programs in Engineering and Technology Management. The University of Colorado at Boulder has an Engineering Management degree that is a Web-based or distance-learning program where the learning experience has a minimal in-residence component. Ninety percent of the program's students participate from locations around the world, either by live microwave TV or by videotape. This program differs significantly from the proposed ETM Program at Mines which is a 100% in-residence program. The University of Colorado at Denver is currently proposing to convert their Masters of Engineering in Engineering Management to an on-line, distance delivery program. Emphasis in this program is on utilizing the electronic media for educational delivery. The University of Denver offers a Master of Science in Management and Engineering joint-degree program between its business and engineering schools. Each of these programs differs significantly from the CSM-proposed ETM Program in that they are targeted primarily to mid-career professionals. For example, the CU-Denver program requires students to have 5+ five or more years of work experience in order to be admitted to the program. In addition, the major emphasis in each of these programs is on "engineering management" while the ETM Program proposal proposes an equally important emphasis on "technology management." Finally, the CU-Boulder and CU-Denver programs are both designed to be distance learning programs while the proposed ETM Program is an in-residence program enabling the student to exploit CSM’s highly-valued technology infrastructure.
The Board of Trustees of The State Colleges has forwarded a concept paper for a Special Education Bachelor of Arts (BA) degree program to be offered at Metropolitan State College of Denver (MSCD) that responds to the Commission newly adopted Teacher Education policy reforming teacher education programs. The special education degree program intended to provide students who are planning a career in education with the option of pursuing a new academic addressing the diverse needs of children and adolescents with mild to severe disabilities. The Special Education degree program curriculum emphasizes communication, literacy, mathematics, assessment, instruction/adaptation, collaboration and transition in reference to meeting the educational needs of students with disabilities from the ages of 5 to 21.

The Colorado Department of Education approved a pilot teacher licensure in Special Education in 1998 for the following degree programs: Anthropology, Art, Chemistry, Chicano Studies, Computer Science, English, Journalism, Meteorology and Physics. The institution is required to request full authorization if they wish to continue to offer Special Education licensure to comply with the statute and CCHE policy.

MSCD has prepared a concept paper that presents a rationale for a degree program that specifically prepares students to become Special Education Teachers. The background section of this agenda item presents an overview and analysis of the initial planning information contained in the concept paper submitted by the State Colleges on behalf of MSCD. At the point in the program approval process, CCHE is interested in role and mission, duplication, preliminary evidence of bona fide program need, and that teacher education programs are following the performance-based model.

The proposed special education degree is within the institution’s statutory role and mission. According to statute, MSCD is a comprehensive baccalaureate institution that offers a variety of liberal arts and science, technical and educational programs. This major is viewed as contributing to MSCD’s role and mission by providing a teacher preparation program that works with and meets the community needs of a diverse society.

The need for additional special education teachers is documented through a National Conference of State Legislatures (NCSL) report stating that, "More than half of all superintendents in the NCSL survey responded to an open-ended question that it is difficult to find full-time special education teachers."

Students will receive education that includes a minimum of 800 hours of field experience as well as training in the sciences, mathematics, Social Studies and language arts content and case-based special education curriculum. The curriculum of the proposed program includes reading literacy, mathematics, assessment, and instructional management. It has 40 credit hours of general studies, 28 credit hours of a general education core, including professional knowledge, credit hours of the special education major, and 16 hours of student teaching. The total number of credit hours required for graduation is 126. Although CCHE policy allows Special Education degree programs to exceed four years because of its specialized requirements, it is possible for a student to complete the proposed degree program within the four-year framework. Conceptually, the proposed curriculum design would appear to comply with CCHE’s Teacher Education policy.

CCHE’s Teacher Education policy requires that a degree program designed to prepare teachers is characterized by: content that relates to the curriculum taught in the K-12 school system, (b) general education foundation, (3) pro
knowledge that guides the student to apply the content knowledge, and (4) a robust field experience to test knowledge and skills. After review of the concept paper, staff has identified the following issues or concerns that should be addressed in the full proposal.

1. Since the curriculum of the proposed Special Education degree program is directly aligned with the standards for Special Education teachers, CCHE assumes that the Special Education degree program will be the only degree program offered by MSCD leading to Special Education licensure. The full proposal should clarify this point.

2. MSCD currently offers 22 degree programs that CDE approved for Special Education licensure. The proposal should include an analysis of the enrollment impact on these degree programs if the new program is implemented.

3. In the degree proposal, MSCD should describe the partnerships with school districts that support field experiences in special education, particularly those with Denver Public Schools. The Commission has a particular interest in ensuring the teacher candidates have a comprehensive, supervised field experience in a professional development school that provides strong role models, continuous feedback and support from both college faculty and supervising teachers. MSCD participates in the Colorado Partnership for Education Renewal. The proposal needs to contain specific information on the way that Special Education fits within the partnership guidelines.

4. How the curriculum design specifically aligns with the K-12 content, performance-based standards for teaching licensing.
   - How the institution proposes to assess and measure that the teacher education candidates have achieved the specified skills in each standards element, emphasizing demonstrations of the competencies of candidates as they work with children in field settings.
   - How assessment of candidates is integrated into teacher preparation and the intensity of the experiences of the candidates with children in the field.

5. How the overall teacher education program proposes to meet the criterion in S.B. 154 related to institutions of higher education as adopted in CCHE policy in March 2000.
   - Adoption of admission criterion.
   - Multiple entry points exist for students considering teacher education.
   - A screening process identifies successful teacher education candidates.
   - A counseling process advising teacher education candidates on the expectations of candidates.
   - Curriculum design integrates field experience with content knowledge.
   - The program identifies the knowledge, skills or dispositions to be developed in each course and field experience.
   - Design includes comprehensive assessment of candidate’s knowledge of subject matter.

IV. INFORMING THE GOVERNING BOARD

Following this meeting, the Commission shall inform the governing board about the above matters, and any additional issues that the Commission may raise about the proposed Bachelor of Arts degree in Special Education. CCHE recommends consultation with the statewide transfer coordinator before the full proposal is developed.

Attachment A: Concept Paper for a Bachelor of Arts in Special Education
Colorado Commission on Higher Education (CCHE)
August 9, 2000
Agenda Item VI, A(2)
Attachment A

Concept Paper for a Bachelor of Arts in Special Education

Metropolitan State College of Denver

The School of Professional Studies is proposing the development of a new academic major in special education. Graduates of this program would possess the knowledge and performance competencies to address the diverse needs of children and adolescents with mild to severe disabilities. Special curricular emphasis would be given to communication, literacy, mathematics, assessment, instruction/adaptation, management, collaboration, and transition in reference to meeting the educational needs of students with disabilities from the ages of 5 to 21. The rationale for the development of this major is derived from a number of issues in special education that have influenced personnel preparation in this field.

Firstly, special education is a unique preparation program because it must address K-12 standards as well as considerable variation in the manifestation of disabilities. Teachers who are prepared in this area must demonstrate competency in meeting the needs of young children as well as young adults. Thus, special education teachers must possess significant knowledge and skills in developmental issues and instructional techniques for early childhood, middle childhood, adolescence, and adulthood. For example, a special education teacher must be equally well versed and practiced in critical aspects of early intervention as well as critical aspects in planning for transition and successful community adjustment. Each developmental stage that a child passes through may also be altered by the nature of the disability, thereby increasing the complexity of instructional needs.

Secondly, preparation in special education encompasses not only a significant age span, but a broad disability span that is increasing due to the current inclusionary emphasis on provision of special education services. Historically, special education teacher education preparation programs were based on categorical models of service delivery. For example, preparation programs were devoted to one particular disability, such as learning disabilities or mental retardation. Today there is growing recognition that a separation of disabilities is an artificial one as is the separation of students with disabilities from their nondisabled peers. Although the Colorado Department of Education shifted from a categorical model to an educational needs model many years ago, there is continued movement in this direction. It has been proposed that the current Moderate Needs Teacher I Special Education License be replaced by the Special Education Generalist License. The new Generalist program would require that students be prepared to meet the needs of all students with disabilities from mild to severe whereas the Moderate Needs Teacher I program focused on meeting the needs of students with mild to moderate disabilities. These disabilities include mild to severe cognitive, physical, communicative, sensory, and social/emotional impairments. Thus, special education teacher preparation programs will need to modify and extend the curriculum to cover the performance outcomes necessary to meet the needs of learners with severe disabilities.

Finally, the need for a special education major can be justified in light of the need to prepare teachers within a four-year period of time. The scope of special education preparation necessary to prepare teachers to meet the needs of learners with all types and levels of disability exceeds that which could be reasonably accomplished in a program that requires liberal arts major in addition to a professional special education licensure sequence. There is also a need to provide special education teacher with courses from general education preparation programs, in an effort to provide more effective instruction in inclusive settings and to bridge the current gap between general education and special education programs. The development of a separate special education major would insure that these teachers would receive the necessary preparation and credentials within a four-year program plan.

Program Goals

Program goals for the proposed major in Special Education would be based on the Colorado Department of Education Performance-Based Standards for Colorado Teachers (2000), which include the Model Content Standards. In addition, the proposed major would address the proposed Licensure Standards for the Special Education Generalist (1999) as well as the core standards for the Exceptional Needs Specialist set forth by the National Board for Professional Teaching Standards (1997). The philosophical context for the standards for the Exceptional Needs Specialist suggests that there are critical aspects of practice that separate exemplary teachers from average teachers. The special education faculty supports the premise that teacher preparation programs should strive for excellence in all areas of training as opposed to the general goal of competence. Therefore, the MSCD special education major would specify the following as preparation goals for all preservice teachers in this area:

1. Teachers must demonstrate commitment to students and their learning;
2. Teacher must know the subjects they teach and how to teach these subjects to students;
3. Teachers must demonstrate ability for managing and monitoring student learning;
4. Teachers must demonstrate systematic thinking about their practice and the ability to learn from experience;
5. Teachers must demonstrate ability to work collaboratively within learning communities.

Special Education Program’s Relationship to MSCD Role and Mission

According to MSCD’s founding statute, Metropolitan State College of Denver is a comprehensive baccalaureate institution that offers a variety of liberal arts and science, technical and educational programs. Clearly it is within MSCD’s statutory mission to offer a major program to prepare special education teachers. MSCD’s self-adopted mission is as follows:

The mission of MSCD is to provide a high quality, accessible, enriching education that prepares students for successful careers, post graduate education, and life-long learning in a multicultural, global, and technological society. The college fulfills its mission by working in partnership with the community at large and by fostering an atmosphere of scholarly inquiry, creative activity, and mutual respect within a diverse campus community.

This major contributes to Metro’s role and mission by providing a teacher preparation program that works with and meets the community needs of a diverse society.

The mission of the MSCD special education program will be to prepare teachers to become skilled decision makers in diverse educational contexts. In order to fulfill this goal, special education program faculty and cooperating teachers will serve as role models by teaching and demonstrating learning theories and preferred practices in a variety of diverse educational environments. As an urban institution, MSCD is committed to teacher preparation that fosters variations in beliefs, traditions, and values within society. The special education faculty believes that preparation for good decision making cannot be accomplished without knowledge of the direct effects of the cultural and environmental milieu on the child, adolescent, and family. Thus, it is imperative that programmatic goals provide focus to the diversity that awaits teachers in all types of classrooms.

Need for Special Education Major

The proposed special education major would fill an identified need for the preparation of qualified teachers to meet the personnel shortage in this area. In June of 1996, House Bill 96-1249 was signed into law in the State of Colorado. This law stated that "there is a need for state-supported institutions of higher education in this state to offer programs that are of a reasonable duration for the education of entry-level special education teachers” (1996, p.2). This bill was initiated and passed because of severe personnel shortages in special education in Colorado. One projection sited by the CCHE estimated 1,211 new special education teachers were needed during the next five years (CCHE Superintendent Survey, 1999). Furthermore, the National Conference of State Legislatures reported that “More than half of all superintendents in the NCSL survey responded to an open-ended question that it is difficult to find full time special education teachers” (Hirsh & Samuelsen, 1999, p.71). This special education personnel shortage is also a pressing problem throughout the United States; the demand for special education teachers is far greater than the demand in general education (Boe, Cook, Kaufman, & Danielson, 1996). MSCD special education licensure program was developed as a response to the critical need to prepare more teachers to meet the needs of children and adolescents with disabilities in this state. Prior to the passage of this House Bill, special education licensure was granted only to those teachers with graduate credit in this area of specialization. The MSCD special education licensure program was developed as a Moderate Needs: Teacher I Pilot Program in 1997 in response to a direct request from the Colorado Department of Education. Although this pilot program has been offered since the Fall Semester of 1997, faculty have struggled with concerns that students are not as well prepared as they should be because of the requirement that these special education preservice teachers complete an academic major as well as the full load of a licensure program. Consequently, these special education students experience a hardship as they attempt to complete their training within a "reasonable duration" as required by House Bill 96-1249. The proposed academic major in special education will enable teacher candidates to concentrate on the specific and extended preparation goals for teachers working with exceptional children within the expected four year period for attaining a baccalaureate degree.

Program Duplication

MSCD was the first program to offer special education licensure at the undergraduate level since the passage of House Bill 96-1249. Although it was recently started, there are approximately 127 students enrolled in the program at this time. It is currently the only undergraduate special education program offered by a public institution in the Denver metropolitan area. Undergraduate students seeking special education licensure at a public college or university would need to travel to the University of Northern Colorado or the University of Colorado at Colorado Springs to receive this training. MSCD’s proposed special education major program would not be likely to be duplicated by the University of Colorado at Denver, as this institution offers programs in education at the graduate level only. Therefore, it would appear that the MSCD program in special education would satisfy a significant need that would not be a duplication of other institutional efforts.

Program Design and Delivery

The MSCD special education major would focus on delivering content with the case-based curriculum approach to teacher preparation. The current special education program recently received national recognition as an innovative program developed to address special education personnel shortages. The MSCD case-based curriculum was cited as an example “of how data-based practices, creativity, and rigor can be combined in the development of exemplary special education professionals” (Rosenberg, 1999, p. 183). In an effort to...
In an effort to bridge the gap between theory and practice, the special education major curriculum would emphasize the need for students to apply knowledge to typical classroom challenges and dilemmas within the framework of decision-making. Since the unifying theme for all teacher education programs at MSCD is "teacher as decision maker in diverse context," it was recognized that this thematic concept or model should be integral to the case-based curriculum. Conceptually, the decision maker theme would serve as the umbrella concept that would influence the objectives of the special education major while case methods would serve as the instructional vehicle for the program (Anderson & Baker, 1999). Decision cases would be used in every class to teach students the skills of reflective thinking and problem solving within the context of diversity. This approach would involve the use of a variety of case techniques, such as case discussions, case experiences, case commentaries, and case literatures to offer students the opportunity to practice problem-solving in simulated classrooms. The use of the case-based curriculum would be extended to practical settings in partner and professional development schools where case analysis and interventions would be practiced and refined.

Courses in the special education major would be provided in traditional, field experience, on-line, hybrid (combination of traditional and on-line), and extended campus classes. Providing the curriculum in a variety of different course formats will increase accessibility to the program for traditional and nontraditional students.

The content of the curriculum for the special education major would be developed to address the International Standards for the Preparation and Certification of Special Education Teachers (Council for Exceptional Children, 1996), the Colorado Licensure Standards for the Special Education Generalist, (Colorado Department of Education, 1999), and the CCHE Teacher Education Program Performance Standards, including the Model Content Standards (Colorado Department of Education, 2000). These standards address the importance of typical and atypical development, communication, literacy, mathematics, assessment, classroom instruction/adaptation, management, technology, democracy, transition and collaboration. Additionally, all special education program majors would take a prescribed general studies program that would prepare them with the knowledge necessary to teach content within the context of special education and general education. The general education core would provide teacher preparation for effective instruction within the context of inclusionary programs.

Curricular Outline

General Studies = 40 hours
  English
  Math
  Speech
  Social Sciences
  Natural Sciences
  Arts & Humanities

General Education Core = 28 hours
  Foundations
  Literacy
  Technology
  Exceptionality
  Standards & Curriculum
  Content Methods
  Assessment

Special Education Major = 42
  Legal Issues
  Medical & Physical Aspects of Disabilities
  Language Development & Literacy
  Individualized Literacy Programs
  Diagnosis
  Individualized Instruction: Moderate Needs
  Individualized Instruction Severe Needs
  Classroom Management
  Collaborative Practices
  Transition
  Assessment & Instruction: Elementary Practicum
  Assessment & Instruction: Secondary Practicum

Student Teaching = 16 hours

Total Program = 126 hours
**Required Resources**

Currently the special education program has three full time faculty members to teach and supervise special education students. These full time faculty also assist in the teaching of the 8 to 10 sections of the service course, SED 3600 (The Exceptional Learner), which is required for all teacher education students in professional preparation programs. Typically, six to seven adjunct faculty members are needed on a per semester basis to assist in the teaching of offered course work. Approximately 50% of all special education courses are taught by adjunct faculty. It is anticipated that one additional faculty member would be necessary to provide a special education major. If this special education major is approved, the MSCD administration has committed to providing the additional faculty member to implement the program.

**References**


COLORADO COMMISSION ON HIGHER EDUCATION (CCHE)
AUGUST 9, 2000
AGENDA ITEM VI, A(3)

TOPIC: CONCEPT PAPER: BACHELOR OF ARTS IN LIBERAL ARTS AND SCIENCES AT METROPOLITAN STATE COLLEGE OF DENVER (MSCD)

PREPARED BY: DIANE LINDNER

I. SUMMARY

The Board of Trustees of The State Colleges has forwarded a concept paper for a Bachelor of Arts degree in Liberal Arts and Sciences at Metropolitan State College of Denver (MSCD) that responds to the recently adopted Teacher Education Policy. The degree program is designed to serve students who are planning a career in elementary education and those interested in pursuing a broad-based liberal arts and sciences program.

The major will provide a wide breadth of knowledge. Students in the teacher education track will take courses in professional knowledge and complete student teaching. Students pursuing the general track will complete an internship in their area of specialization.

Unique characteristics of the interdisciplinary degree program include 1) integrating knowledge from disciplines; 2) requiring a portfolio in which students identify and discuss the relationship among their courses; 3) completing a professional emphasis, and 4) completing an internship or field experience that requires students to apply the knowledge.

To comply with statute and CCHE policy, the institution is required to request degree authorization and teacher education authorization if they wish to offer a new degree program in Elementary Education. The concept paper is the first step in the degree approval process.

II. BACKGROUND

MSCD has prepared a concept paper that presents a rationale for a degree program to prepare students to become elementary education teachers. The background section of this agenda item presents an overview analysis of the initial planning information contained in the concept paper submitted by the State Colleges behalf of MSCD. At this point in the program approval process, CCHE is interested in role and mission duplication, preliminary evidence of bona fide program need, and that teacher education programs are following the performance-based model.

The proposed degree is within the institution’s role and mission. The statute defines MSCD’s role and mission as being "…a comprehensive baccalaureate institution with modified open admission standards; …that shall offer a variety of liberal arts and science, technical, and educational programs." The proposed Liberal Arts and Sciences major would serve both elementary education candidates and students pursuing careers that require broad foundation in liberal arts.

The proposed program would include 34-39 credit hours of general education, 42 credit hours of professional knowledge and student teaching or internship, and 40-46 credit hours in the liberal arts and sciences major. The liberal arts and science core contains six hours of Integrated Sciences Sequence, Integrated Social Science courses and an interrelated set of courses in the Arts and Humanities. Students pursuing the teacher licensure track would complete a minimum of 800 hours of field experience. Students pursuing the general track would be required to complete an internship in their selected field. The total number of credit hours required for graduation totals 121 -- within the statutory mandate of a four-year degree program.

The premise of this proposal is that a multi-disciplinary degree program provides a broader knowledge...
prospective elementary teachers than discipline-based programs. MSCD believes that a significant number of elementary education candidates will choose to pursue this degree. MSCD prepares a large number of prospective elementary teachers, second only to the University of Northern Colorado.

III. ITEMS TO BE ADDRESSED IN THE PROPOSAL

CCHE’s Teacher Education policy requires that a degree program designed to prepare teachers is characterized by: (a) content that relates to the curriculum taught in the K-12 school system, (b) general education foundation, (3) professional knowledge that guides the student to apply the content knowledge, and (4) a robust field experience to test knowledge and skills. After review of the concept paper, staff has identified the following issues or concerns that should be addressed further in the full proposal:

(1) Explanation of the Integrated Course concept -- how this concept defines the program and why is there a difference in credit hour requirements between the elementary education track and the general liberal arts track. For example, the general education credits vary – why wouldn’t they be the same?

(2) Clear documentation of enrollment and graduation projections. The concept paper states that the degree program will be available to over 4,000 undeclared majors at the college. What evidence exists to support the claim that these majors will enroll in this degree program?

(3) How the implementation of the proposed program will impact the enrollment in other academic programs currently leading to elementary teacher education programs offered by MSCD. MSCD currently offers 23 degree programs for Elementary Education, including Anthropology, Art, Behavioral Science, Chemistry, Chicano Studies, Computer Science, English and Philosophy.

(4) How will the proposed liberal arts and science degree program affect the enrollment in the five enrollment programs that are currently exempt since they appear to serve similar student populations?

(5) How the curriculum design specifically aligns with the K-12 content, performance-based standards for teacher licensing.

- How the institution proposes to assess and measure that the teacher education candidates have achieved the specified skills in each standards element, emphasizing demonstrations of the competencies of candidates as they work with children in field settings.
- How assessment of candidates is integrated into teacher preparation and the intensity of the experiences of the candidates with children in the field.

(6) How the overall teacher education program proposes to meet the criterion in S.B. 154 related to institutions of higher education as adopted in CCHE policy in March 2000.

- Adoption of admission criterion.
- Multiple entry points exist for students considering teacher education.
- A screening process identifies successful teacher education candidates.
- A counseling process advising teacher education candidates on the expectations of candidates.
- Curriculum design integrates field experience with content knowledge.
- The program identifies the knowledge, skills or dispositions to be developed in each course and field experience.
- Program design ensuring student teachers have a comprehensive, supervised field experience in a professional development school that provides strong role models, continuous feedback and support from both college faculty and supervising teachers.
- Design includes comprehensive assessment of candidate’s knowledge of subject matter.

IV. INFORMING THE GOVERNING BOARD

Following this meeting, the Commission shall inform the governing board about the above matters, and
additional issues that the Commission may raise about the proposed Bachelor of Arts degree in Liberal Arts and Sciences.

Attachment A: Concept Paper for a Bachelor of Arts in Liberal Arts and Sciences
Colorado Commission on Higher Education (CCHE)
August 9, 2000
Agenda Item VI, A(3)
Attachment A

Concept Paper for a Bachelor of Arts in Liberal Arts and Sciences

Metropolitan State College of Denver

Background

In a 1999 survey by the Colorado Commission on Higher Education, superintendents and principals of Colorado public schools indicated that elementary teachers would benefit from a broader, interdisciplinary approach to teaching. They also emphasized the importance of teachers knowing the sciences and mathematics. In the survey, the superintendents projected a need for 5443 new elementary teachers and, allowing for retirements, a total need for 6150 elementary teachers by 2005.

To address the need for educators in the Denver metropolitan area, MSCD has developed an interdisciplinary liberal arts and sciences major that will primarily prepare students for careers in teaching but that will be attractive to students interested in other professions. The major will provide a wide breadth of knowledge through General Studies and courses in the core of the major, and it will provide depth of knowledge in the Disciplinary/Professional Emphasis within the major. The areas included in the disciplinary/professional emphasis are those that will prepare students to apply their knowledge to their careers.

Key elements of the major include 1) integrating knowledge from various disciplines; 2) requiring a portfolio in which students identify and discuss the relationship among their courses; 3) completing a Disciplinary/Professional Emphasis, and 4) completing an internship that requires them to apply their knowledge.

A. Goals

Program Goals: The proposed Bachelor of Liberal Arts and Sciences extended major will provide

- An undergraduate, interdisciplinary education consisting of a broad background in the liberal arts and sciences for students in the Denver Metropolitan area and the State of Colorado. The major focuses on preparing graduates for professional positions as well as for post baccalaureate education in graduate and professional schools.
- Graduates with critical thinking, problem solving, and communication skills that have been developed through a focus on understanding traditional disciplines from various integrated perspectives.
- Broadly educated graduates who can fully participate as professionals and leaders in a changing society, including graduates prepared to enter the teaching profession immediately after graduation.

Student Outcome Goals:
The graduate of the proposed Liberal Arts and Science extended major should have knowledge and the ability to demonstrate their understanding of

- The central concepts and methods of inquiry in various disciplines, their relationship to one another, and the methods of clearly communicating these to others.
- The natural and physical laws and processes that govern life of the individual, of the earth, of its people, and of all species.
- The effect of and uses of technology in gaining and using knowledge in a career and in lifelong learning.
- The role of history and culture in civilization.
- The application of knowledge in an internship or student teaching setting.

B. Institutional Role and Mission, Planning and Priorities

According to MSCD’s founding statute, Metropolitan State College of Denver is a comprehensive baccalaureate institution that offers a variety of liberal arts and science, technical, and educational programs. Clearly it is within MSCD’s statutory mission to offer a major in Liberal Arts and Sciences. MSCD’s self-adopted mission is as follows:

The mission of MSCD is to provide a high-quality, accessible, enriching education that prepares students for successful careers, post-graduate education, and life-long learning in a multicultural, global, and technological society. The college fulfills its mission by working in partnership with the community at large and by fostering an atmosphere of scholarly inquiry, creative activity, and mutual respect within a diverse campus community.

The Liberal Arts and Sciences major fulfills the MSCD role and mission by educating students in the central concepts and methods of inquiry in the liberal arts and sciences. The major enhances students’ ability to enter a career, to advance in it, and to change careers as needed. The program addresses the need for broadly educated professionals in business, industry and in teaching. Since the program will meet teacher licensure standards, graduates will be qualified for initial teacher licensure.

C. Structure of the Degree Program
X. Structure of the Degree Program

The major has three parts that build upon and complement each other. Together, these segments form a high-quality, innovative program.

1. General Studies

This first segment is called General Studies. The General Studies courses develop the basic skills required for further study and provide the core of knowledge for all students with this major. The courses are those that easily transfer from other colleges and universities and from the community colleges. For students preparing to teach in elementary school, the list of required General Studies courses will support licensure, as well as fulfill overall college requirements for General Studies. Students seeking Elementary Education Teacher Licensure must take the Required General Studies for Elementary Education Licensure.

2. The Liberal Arts and Sciences Major Core

The Liberal Arts and Sciences Major Core builds upon students’ General Studies experiences. The major has two goals: developing students’ ability to integrate and synthesize knowledge from various disciplines and increasing students’ breadth of knowledge. Six courses comprising three sequences will provide students an opportunity to understand the relationship between different disciplines. The Integrated Sciences Sequence (6 hrs) is currently in the MSCD curriculum. This sequence was revised in 1998-99 and piloted in fall 1999 to help ensure that the approach was academically sound. The Integrated Social Sciences courses and the Interrelations of Arts and Humanities courses are under development. Each of these courses will have the rigor required to be prerequisites to upper-division study in the Disciplinary/Professional Emphasis that completes the program. Students’ breadth of knowledge will be further expanded by required courses that emphasize selected topics. Emphasis is placed on science and mathematics. Finally, students will begin building their portfolio. This second segment develops students’ ability to think broadly and critically about the major disciplines.

3. The Disciplinary/Professional Emphasis

Finally, students complete 30-42 hours of mostly upper-division work to complete an emphasis area. This is called The Disciplinary and Professional Emphasis. This set of courses prepares the student to enter the world of work. It offers a disciplinary emphasis with teacher licensure as one option. Other options will be chosen for their particular appeal to students, for their application to careers, and for their ability to broaden a student’s knowledge of the application of knowledge to a particular discipline or professional area.

D. The Performance-Based Assessment

1. The Portfolio

In their second year, students will begin a portfolio that documents their development and serves as a continuous assessment of academic progress and experience. It will document student performance in the program, particularly in the Disciplinary/Professional Emphasis. The portfolio is a continuing record of work completed in courses; it is organized to show the relationships among courses and concepts. Students will develop summaries and provide illustrations of representative work completed in courses, and then tie the courses together through essays and/or journal-like entries. The required portfolio courses will guide students in portfolio development and will emphasize using technology as part of the portfolio. Ideally a student will present an electronic portfolio, as well as a traditional paper portfolio. The portfolio will serve as evidence when students apply for jobs or when they need to demonstrate their academic progress in transferring to other institutions or to other majors. Teacher licensure candidates are required to do a portfolio to be certified. The portfolio complements other assessment tools, such as grades and tests.

2. The Internship

The required internship will link knowledge to professional life by a practical experience in the workplace. Internships will be developed within the discipline and program area and with the MSCD Office of Cooperative Education, as appropriate. For teacher licensure candidates, student teaching will fulfill the internship requirement.

E. Access to the Program

The program promotes access because courses will be offered on campus, at Metro North and Metro South, as well as through alternative delivery methods, i.e., Internet classes. The courses will be offered at all times during the day, in the evenings, on weekends, and in flexible, on-line formats. A full course rotation plan will allow students to complete the program in eight semesters.

There is easy transfer from community colleges because the General Studies courses are part of the Community College common core and are those courses which students most often take before they transfer to MSCD. In discussions with the community colleges, MSCD has agreed that courses such as the integrated science sequence can be offered at MSCD and at the community colleges. A joint faculty development effort by MSCD and community college faculty will enhance the transfer of courses and make more efficient use of facilities. Accessibility and convenience are built into the Liberal Arts and Sciences major.

F. Bona-Fide Program Need; Market Served; Potential Program Duplication
This major is timely because it will be designed to meet the newly-approved *Performance-Based Standards for Colorado Teachers* and the *Model Content Standards*. The major, because it focuses on both arts and sciences, and because it provides the strong *Disciplinary/Professional Emphasis*, is unique at MSCD and in the state. Through the blending of arts and sciences, the program encourages students to take a broader view of their lives and society.

Besides providing an avenue to licensure in elementary school teaching, many other students will enroll in this major because it allows students the flexibility to study a range of disciplines leading to a strong, applied emphasis. The program will be available to the over 4,000 undeclared majors at the college, and some may be attracted to a broad-based education. Studies show that students who have a declared major are more likely to complete a degree, and thus, this major should assist in raising retention and eventually graduation rates.

**G. Program Duplication**

Three other liberal arts degrees exist in Colorado: Mesa State College has a B.A. in Liberal Arts, Fort Lewis College and the University of Colorado at Boulder both offer a B.A. in Humanities. These majors do not contain the science component that MSCD’s proposed Liberal Arts and Sciences major has. The proposed majors at the University of Northern Colorado and at Western State do not seem to have the wide applicability of the MSCD major. The preliminary information we have about the UNC and Western State programs shows that they are more narrowly focused on teacher preparation with fewer options for students interested in other areas. The MSCD major provides a greater set of options for students, as well as meeting the requirements for licensure. Finally, because the student bodies of MSCD, Western State, and UNC differ, there is no unnecessary duplication. We believe the organization of this major is unique and thus does not duplicate existing programs.

**G. Program Design (Areas of Study: Curriculum Outline)**

<table>
<thead>
<tr>
<th>General Studies</th>
<th>Licensure Students</th>
<th>Nonlicensure Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>39</td>
<td>34</td>
</tr>
</tbody>
</table>

Students must consult the appropriate track for General Studies and for the *Disciplinary/Professional Emphasis*. Students seeking Elementary Education Teacher Licensure must take the **Required General Studies for Elementary Education Licensure, which is 39 hours. All other students are required to take 34 hours**. To complete the degree in eight semesters, the student must choose carefully from the recommended General Studies courses. These courses are currently accepted for General Studies credit in the appropriate categories, are prerequisites for further study, and transfer easily from other colleges and universities, as well as from the community colleges in Colorado.

**The Liberal Arts and Sciences Major Core**

<table>
<thead>
<tr>
<th>Required Courses (Provided for Discussion Purposes)</th>
<th>Licensure Students</th>
<th>Nonlicensure Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSS/CMS 1010 Introduction to Computers</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

or

CSS 1080 The World Wide Web, The Internet and Beyond 3 3

Integrated Natural Sciences I and II 6 6

Integrated Social Sciences I and II (under development) 6 6

Interrelations of Arts and Humanities I and II (under development) 6 6

LAS 2000 Introduction to Portfolio Development (under development) 2 2

LAS 4000 Capstone/Advanced Portfolio Development (under development) 2 2

Subtotal 17 25

To complete the remaining hours, the student will choose at least one course from each of the categories listed below. At least 12 credit hours must be upper division and at least 8 credit hours must be in science or mathematics.
Critical Inquiry and Analysis 3 3
Civilization and Culture 3 3
Science Explorations 6 6
Literary and Aesthetic Expressions 3 3
The Individual and Society 3 3

Subtotal 29 21

Disciplinary/Professional Emphasis 42 30-40
Licensure students will take the licensure sequence
Internship or Student Teaching 12 6-10
Other courses determined by the discipline 30 20-34

Other electives outside the major 0 0-10
Chosen with the help of an advisor

Total 121 12

H. Resource Needs

The proposed program will have an estimated enrollment of 100 students after the first five years. Four new courses are proposed that will comprise the sequences: Integrated Social Sciences I and II and Interrelations of Arts and Humanities I and II. These courses are being developed to meet Colorado Model Content Standards.

Faculty Needs

One faculty member in science education will be needed to support this major. If this major is approved, the MSCD administration has committed to providing the additional faculty member to implement the program. Teaching the integrated courses will require specially educated faculty – faculty knowledgeable about teaching interdisciplinary courses. This education will be supported by professional development funds, and reassigned time will be given to faculty for the development of the courses.
TOPIC: DEGREE PROGRAM NAME CHANGES: COLORADO STATE UNIVERSITY AND UNIVERSITY OF SOUTHERN COLORADO

PREPARED BY: SHARON M. SAMSON

I. SUMMARY

This agenda item describes the degree program name changes that the Executive Director has approved during the past month. In November 1997, the Commission adopted a policy requiring Commission approval of changes that involve substantive changes to the curriculum, a different target population, or expansion of the scope of the degree program. CCHE staff analyzes the impact of each submitted name change request. If non-substantive, the Executive Director approves the requested change. The Commission discusses substantive name changes.

The two changes approved by the Executive Director include:

1. Institution: Colorado State University
   Current Program Name: Physical Science (B.S.)
   New Program Name: Natural Sciences (B.S.)
   Approved by: The State Board of Agriculture (June 14, 2000)

   Rationale:
   To align the degree program with an integrated science curriculum that supports teacher preparation in the sciences and aligns with CDE content standards.

   Scope of Proposed Change:
   No substantive curriculum changes. The required number of credits for graduation is 120 – a four-year science degree.

   Proposed Action by Executive Director:
   Approve the name change as requested.

2. Institution: University of Southern Colorado
   Current Program Name: Industrial Science and Technology (B.S.)
   New Program Name: Facilities Management and Technology Studies (B.S.)
   Approved by: The State Board of Agriculture (May 3, 2000)

   Rationale:
   To reflect the curriculum of the degree program more precisely.
Scope of Proposed Change:

No substantive curriculum changes.

Proposed Action by Executive Director:

Approve the name change as requested.