

## **CRITERION 8. SUPPORT**

### **A. Program Budget Process and Sources of Financial Support**

State support for the School of Mines accounts for slightly less than one third of the overall institutional budget. The state support for FY09 for the program is shown in Table D-3.7.2. Once the South Dakota Legislature approves the year's allocation for public higher education, the Board of Regents allocates funds to the institutions based on a formula that takes into account many factors in addition to enrollment. At the campus level, program funding from state sources is controlled by the Office of the Provost.

Starting in April 2010, open budget hearings were held to which representatives from all academic programs were invited and given time to present information on their academic program budget needs and priorities. While the hearings were open to all, the primary audience was the Vice President for Business Affairs, Tim Henderson, the President and the Provost. The information gathered from these April 2010 hearings was used in formulating the FY 2011 budget.

With regard to continuity of support, each year's prior program state budget serves as a basis for the next year. Over the current review cycle the relative state support for the program has remained very stable as has that from the SDSM&T Foundation, while external grant/contract support has continually increased. A significant indicator of continuity of support was with the replacement of three faculty FTEs through retirement over the current review cycle. Financial support for the program is summarized in Tables D-3.7.1 through D-3.7.4, and will be discussed more thoroughly in subsequent sections.

### **B. Sources of Financial Support**

Tables D-3.7.1 through D-3.7.4 list all sources of financial support for FY09 including projections for FY10 and FY11. The state support (Table D-3.7.2) for the program in FY09 was \$478,394 or 49% of total support. Non-state dollars (Foundation/grants/contracts) comprise the other 51% of program support. 83% of the total FY09 state support went toward faculty salaries.

Another noteworthy source of support is that for faculty travel (FY09 \$70,528). This support is noteworthy in that it allows for faculty professional development. 73% of support for faculty travel is derived from grants/contracts.

Outside of the support listed in Table D-3.7.1 through Table D-3.7.4 is that of student scholarship support. In FY09 student scholarship support totaled over \$59,000 and came from a variety of sources such as Foundation endowments and professional societies. Program students historically have been very competitive within the national professional societies and their scholarship programs. A total of 56 program students were supported with academic scholarships.

### **C. Adequacy of Budget**

The state support (\$478,394 in FY09) provides a critical base for program execution. Importantly, the state support provides the necessary faculty FTEs to deliver the necessary breadth and depth of the program.

However, the state support is itself inadequate to support fully all the program needs. Consequently, program faculty have very deliberately, and successfully, looked to external sources to help broaden the portfolio of support for the program. Noteworthy external program support secured during the current review cycle includes that from the private sector (e.g. Nucor Professorship (\$1M endowment), John Deere Foundation) and through federal agencies (e.g. National Science Foundation, NASA). With regard to federal support, Table 6-0.1 summarizes the undergraduate curriculum development awards that were externally supported during the current review cycle.

We believe that the total program budget (FY09 \$975,505) is more than adequate to support the program, and in fact, has allowed us the means to create a very distinct and successful program.

#### **D. Support of Faculty Professional Development**

At the institutional level, faculty development is administered by the provost. In 2009, the provost created an advisory group for faculty development consisting of department heads and a faculty member who is the coordinator for faculty development. Dr. Kellar is a program representative for this advisory group. The faculty development coordinator, Dr. Jennifer Karlin, is a faculty member in the industrial engineering program, and she has responsibility for the creation and offering of faculty development activities that span the academic year and begin with the new faculty orientation at the beginning of the academic year.

The budget for faculty development is controlled by the provost, but signature authority has been granted to the coordinator, Dr. Karlin. Institutional and state funds for faculty development are approximately \$38,000 per academic year. In addition, a new student fee instituted in 2009 generates approximately \$110,000 per year for targeted use in developing mobile computing applications in the curriculum.

As shown in Table D-3.7.1 support for program faculty travel in FY09 was \$70,528 augmenting the support available from the institution and the faculty development advisory group. Annually the Department Head (Kellar) reviews with the program faculty their Professional Development Plan, as described in section 6A. As detailed in section 6F program faculty are involved in a wide and varied array of faculty development activities.

#### **E. Support of Facilities and Equipment**

Described below are the resources used to acquire, maintain, and operate facilities and equipment for the program.

##### Program Level

At the program level Dr. Kellar oversees the accumulated laboratory fees and allots those to support the facilities and equipment. When necessary, Foundation funds are used to augment those fees.

Table D-3.7.1 shows that in FY09 over \$54,000 was available for purchase of equipment. Included in this amount were funds provided by the Provost (\$13,000) for purchase of a rare earth magnetic separator that will be used primarily to support undergraduate laboratories (MET 220L and MET 310L). Table D-3.7.1 also shows that over \$36,000 was used to support equipment for grants and contracts. While this equipment is primarily for research activities it often serves dual usage with the BS-level program. A prime example of this is the recent purchase of a field emission scanning electron microscopy (SEM) through a National Science Foundation Major Research Instrumentation award. The SEM is used routinely within the program's laboratories.

Similarly, industrial/private sector support of our program has led to significant equipment/facilities over the current review cycle. Specifically, an alumnus donated a trailer (\$10,000) for outreach activities and the John Deere Foundation (\$20,000) has supported acquisition of blacksmithing equipment.

In summary, program faculty are acutely aware of the need to continually update our facilities/equipment and have been able to accomplish this goal through an aggressive laboratory development plan that involves funds from a wide variety of sources.

#### Institutional Level

In February, 2005, a request was made of the Board of Regents for a 100% increase in the laboratory fee levied on students for engineering laboratory courses. Regents' priorities for holding increases in student fees to less than 5.5% led the Regents to approve a 22.3% increase in the fees for all laboratory courses taught at SDSM&T. This increase was approved, effective in March, 2005. Funds collected from laboratory fees are allocated in a manner that is determined to be most effective for the maintenance and upgrading of laboratories across campus. The provost receives 10% of all laboratory fees, and the remaining 90% is placed in a special account of the department that offers the course for which the fees were levied. The department head controls use of laboratory fee revenues. The provost typically redirects his 10% of laboratory fee revenues to the departments. In FY09, the provost redistributed to the department heads \$110,000 in laboratory fee revenues.

To further support the ongoing maintenance and upgrading of laboratories and equipment, the allocation of "F&A funds" (i.e., the indirect costs charged to all externally funded programs) was revised in 2006, and again in 2009 after the elimination of the dean positions. The result is that the provost receives 10% of all indirect costs, the vice president for research receives 15% of indirect costs, the principal investigator (PI) of the externally funded program receives 10% of the indirect costs, and the department head of the program where the PI resides receives 10% of the indirect costs.

The provost and vice president for academic affairs collaborates with and seeks advice from the department heads about the best use of the recouped indirect costs in the budgets of the provost and the vice president for research.

### **F. Adequacy of Support Personnel and Institutional Services**

Described below are support personnel and institutional services necessary to meet program needs.

#### Direct Program Support Services

Many of the technical needs of the individual programs are met through a personnel support pool. The largest group in this pool is the Information Technology Services (ITS), which maintains and improves the computing backbone for the institution, as well as providing computing technical assistance. Mr. Tom Leonard, an ITS technician, supports the Metallurgical Engineering program and is located in the Mineral Industries Building (room 124).

The secretary who supports the Metallurgical Engineering program is Ms. Cindy Hise. Work-study students supplement the secretarial support during the academic year. For example, during the 2009-2010 academic year two work-study students supported Ms. Hise and the Metallurgical Engineering program.

Graduate Teaching Assistants (GTAs) are allocated on the basis of the number of undergraduate laboratories and the number of graduate students in a particular program. The GTAs assist faculty members in laboratory instruction, grading of assignments, and recitations. Through this process the Metallurgical Engineering program was able to assign at least one GTA to each lab section and a grader to larger courses taught (e.g. MET 232) during the 2009-2010 academic year. During FY09 \$10,516 was available for GTAs.

Institutional Support Services

Institutional support services on campus are provided by specific units or offices, each of which has means of making services available and tracking user needs on a day-to-day basis. Key campus service entities are detailed below.

<b>Academic Support Entities</b>	
Office of the Registrar and Academic Services (RAS)	RAS office is staffed all regular work hours. RAS staff collaborates with other units on campus to offer weekend “COMPASS Test/Early Registration” days”, Admission’s “Visit Mines” days and summer orientations. Online services offered through WebAdvisor which gives students 24/7 access student records, adding/dropping classes, running a program evaluation, linking to the SDePay system for financial information, and linking to the National Student Clearinghouse for enrollment verifications, etc. NSSE and the SSI results are used to supplement informal daily feedback on services.
Devereaux Library	Extended hours (i.e., open until Midnight five nights a week) are offered during fall and spring semesters. The Reference desk is staffed Sunday through Friday and assistance available in person, by phone or email or online via blog, Facebook page, Twitter and Meebo. Library informational sessions are offered one-on-one or large group upon request. An extensive informational webpage keeps users informed and allows 24/7 access to online. Academic departments are surveyed yearly regarding collections and acquisitions.
Chemical Storeroom	Storeroom is open and staffed during weekdays, and when the Campus Chemical Materials Coordinator is unavailable, the Environmental Health and Safety Director serves as a back-up. Schedule information is posted, and storeroom inventory is available online. Chemical orders can be dropped off any time of day. Information about the chemical storeroom is included in graduate student seminars and is provided to academic departments during the annual Environmental Health and Safety audit. The Campus Chemical Materials Coordinator monitors filled orders to ensure needs are met.
Financial Aid Office	Office staffed weekdays. Asynchronous and off-hours communication is handled via <a href="mailto:FinancialAid@sdsmt.edu">FinancialAid@sdsmt.edu</a> . A toll-free number is offered, and the Financial Aid web site is kept up to date with extensive information on Federal, state and institutional aid programs available at the School of Mines.
Admissions	Digital information is provided via the web or email. Print publications are distributed at college fairs, during hosted campus events and personal visits. Campus visits and consultations with admissions counselor and faculty members are by appointment or on a drop-in basis. Counselors available online through a social network site (Zinch), by phone, and by email.
Information Technology Services and Helpdesk	The ITS Help Desk/Repair Center/Tablet Central is staffed extended hours Monday through Friday. Callers are given a 24-hour emergency pager number for after hour issues. Assistance is available by person, phone or email, as well as online help on the ITS website. Informational surveys are sent electronically once a year to students to identify service needs, and the ITS director meets each semester with the Student Association. Faculty/Staff are queried about their needs during training sessions.
Graduate Education	Graduate office staffed during weekdays, and graduate education web site offers extensive information on all programs, including a web-automated admission application form. Each semester graduate student orientation is offered at which time input on services is solicited. Thesis/dissertation workshops and informational seminar/luncheons are used to communicate about graduate services and to collect input. Email is regularly

	used to keep graduate students informed of requirements, services, and deadlines.
Youth Programs and Continuing Education	Web site is updated daily and includes links to the K-12 campus Web site. Programs and events are actively marketed through brochures, mailings, fliers, advertising, Web sites, and e-mail. Office staff is available via telephone or e-mail during regular campus hours and during programs outside of office hours. Feedback and workshop ideas are solicited via an evaluation form given at each program, and alumni and teacher surveys are used to solicit program ideas
<b>Student Support Entities</b>	
Counseling and ADA Services	Free counseling and disability services offered during weekday business hours and upon request. Counseling offices are centrally located in the student center and close to dining and residence hall facilities. Services are well advertised in student publications and on our website, and contact can be made by phone, email, or personal visits. If needs are not met by employees or graduate interns, off-campus referrals are made. A yearly summary of service activity is compiled.
Career Center	Personalized assistance is given in the office during business hours, by appointment, and via printed publications and electronic formats. An online system provides 24/7 information on job postings, campus interviews, career fairs, and career development workshops. Feedback from students and employers is solicited on a regular basis through surveys, individual conversations and emails. Careful tracking of placement rates and starting salaries are all used to stay abreast of trends relevant to providing career services.
Multicultural Affairs	Programs and events marketed through digital signage, brochures, mailings, fliers, advertising, Web site, and e-mail. An American Indians in Science and Engineering Society (AISES) newsletter produced bi-annually. All offerings published via the online streaming news. Web site has frequently updated streaming news and resource links. Office is staffed during business hours and available during off-hour programming. AISES meets weekly and the National Society of Black Engineers (NSBE) and Society of Professional Hispanic Engineers (SHPE) meet bi-monthly. Free weekly multicultural luncheons encourage drop-in contacts, and all ethnic minority students are contacted via email regularly to ensure that information is shared and needs are being met. A representative is part of the Early Alert team of faculty and staff that meets weekly to discuss interventions for specific students at risk
Student Activities and Leadership	Weekly e-news letters are sent to all students, campus offices, and departments for printing and posting. The Student Activities and Leadership Center (SALC) is staffed during regular business hours for feedback and input regarding programming and student needs. Activities, programs, and events are aggressively advertised through all acceptable on-campus methods, including, electronic billboards, sidewalk chalk, and posters. Student, staff, and event-specific surveys are used to get input on student needs and interests. The webpage is updated weekly and the Facebook page semi-weekly.
Tech Learning Center	Free tutoring offered 7 days a week during fall and spring semester and weekdays in summer. Tutors are high performing students in math, chemistry, computer science, English and/or physics. Tutoring Schedule and Areas of Expertise Charts are posted on the web site, dormitories, and bulletin boards in campus buildings. Data collected on services used is analyzed continuously to adjust programming. TLC coordinator visits with veteran tutors and instructors of key chemistry and math courses to gather input on tutoring service effectiveness. Supplemental instruction sessions are provided for foundational math and chemistry courses.
Ivanhoe International	Office staffed during work hours and email and fax is monitored continuously. A web site for international students has in-depth information about admissions, maintaining

Center	status, and obtaining work permission. Questions about arrival plans, cultural adjustment, and events on campus are handled one-on-one, in orientation sessions, and via email. Email notifications are sent for events, deadlines, and requirements for internationals. Seminars offered on regulatory issues, income tax assistance, etc. Students studying abroad are supported via the web site, pre-travel orientations and the offering of key information on health, safety, emergency planning, cultural adjustment issues in print and digital formats.
Residence Life Office	Office staffed working hours to support mail delivery, key/door access management, and assistance to students and the public. Hall directors and student staff are available 24/7 via on-call/on-duty rotations. Staff cell phone numbers are published. Programming and activities to support students academically and socially are offered. To gain feedback on services and needs, an evaluation is levied each semester (with a 70% average return rate). Hall directors and ResLife Director meet with student groups throughout the year to solicit in-put on services, policies and procedures.
Wellness Center	The Center helps create an atmosphere and ethos of health and fitness for campus. Facilities are open and monitored M-F from 7:00 AM – 8:00 PM, weekends 12:00 PM – 4:00 PM. Hours are customized for holidays. The facility is open for all on campus.
Intramural Sports	Intramural sports programming is run fall and spring semesters by the Intramural Director and Intramural Manager and multiple work study referees. Offerings are publicized via a web site, email and print publications.
Swimming Pool	The pool is open weekdays for as many hours as possible with work-study life guards. Information publicized via e-mail, online, and print notices.
<b>Administrative Support Entities</b>	
Finance Office	A business services web site maintained with information about the full range of administrative services and human resources. The “BUG” (Banner Users’ Group) meets monthly for training. BUG-generated materials are posted on the system portal and advertised via the BUG newsletter. Students are informed of services through mailings, email, and Orientation information packets. Parents informed through the “Parents’ Primer on Finance” publication and parents’ sessions during Orientation. All new employees receive a “Welcome to Mines” packet covering financial services and reporting. Input on services and university finances and budgets are sought through the Budget Advisory Committee.
Purchasing/ Business Services	The Business Services web site includes purchasing, telecommunications, copier, thesis process and print center information and links is updated and available 24/7. Training sessions, e-mail instruction, and one-on-one meetings are offered on demand. The state purchasing group publishes a quarterly newsletter, UPP Words: News from University Procurement Professionals, and does a survey yearly to inquire into end-user needs and satisfaction.
Scheduling	A complete campus scheduling service is offered online, including confirmation, room set-up requests, a log-in book for guests signing up for an event, an event-planning checklist, and detailed information on formation and setup of rooms available.
Human Resources	Information and services pertaining to compensation, recruitment, benefits, performance management, employee relations, and interpretation and enforcement of policies and procedures are offered 24/7 through the HR website and the system portal. Leave and timesheet submission announcements are sent via email. Recruitment, time card, and leave reporting are all handled online. The director of human resources serves as the campus Title IX/EEO (Equal Employment Office) representative for human rights issues and is Co-Coordinator of ADA (Americans with Disabilities Act). Grievance procedures are published online and via the system portal.

University Publications and Web Support	Email is used to inform campus of training sessions for web support and the university's web content management system. Website feedback is collected through e-mail-submission feedback links on all web pages. Media contacts attend a yearly on-campus luncheon at which their input is solicited. Staff members visit local media outlets yearly to solicit feedback and maintain relationships. An online Media/Experts Guide is posted to the website.
Cashier / Student Accounts	Office is centrally located in the student union and open 8-4 weekdays. Web site offers 24/7 access to e-commerce options, including information on payment of tuition, fees, and bills through the South Dakota University System SDePay. Information and FAQs also provided about mail payments, electronic funds transfer, campus debit-card system, and the schedule of tuition and fees.
Digital Signage	A campus digital signage system provides information, event listing, and campus mapping. All campus entities can submit content for display via email. An improved approach to posting is under review as of spring 2010 following a request by the Student Association.
Keyless Entry System	A keyless entry system has been implemented in the student center, all residence halls, and many labs. Expansion to other buildings and facilities is underway and monitored and guided by a University task force.
<b>Research and Related Support Entities</b>	
Office of Sponsored Programs (OSP)	OSP maintains comprehensive website of services for both the Pre-Award and Post-Award aspects of grants. Site includes links to forms as well as contact information for support staff charged with helping with grant-related tasks. A weekly Grant Opportunities Newsletter is published to campus and includes specialized notices about the down-select process for limited-applicant RFPs. Faculty and staff suggestions on content and presentation are used to improve the newsletter. A monthly "Miner's Paydirt" is published to summarize awards granted by monthly and year-to-date. The "Paydirt" also contains feature articles on select awards and campus issues germane to research.
Office of Technology Transfer	OTT receives disclosures from inventors in hard copy form, but an automated / online submission system will be in place by June 2010. Online service capabilities will include tracking through all stages of the process of evaluation and patent application. An MOU between the OTT and the Small Business Development Center (SBDC) in Madison, SD enhances the level and quality of disclosure evaluation services. The OTT is part of a regional Center for Business and Economics that coordinates the use of experts nationwide in the evaluation of intellectual property.
<b>Facilities and Infrastructure Support Entities</b>	
Environmental Health and Safety	Through an extensive web site, EHS provides links to and information on emergency management, campus alert system, incident reporting/tracking, risk management, chemistry storeroom inventory, hazardous waste removal, campus training, campus safety report and crime statistics, and sustainability initiatives. A campus standing committee for Environmental Health, Safety, and Risk Management provides advice on services and initiatives.
Bookstore	Located in the student center, the bookstore is open normal business hours and during many campus special events. The bookstore maintains an online storefront through which users can buy or sell new or used textbooks and purchase software or School of Mines gifts and clothing.
Dining Services	Food services and catering are provided by Aramark, which maintains a web site where users can access the online catering request system, catertrax; read menu

	offerings for the dining room, the miner's shack snack bar, and java city coffee shop; learn about the meal plan options; and check service hours.
Facilities Services (safety, parking, grounds, mail, car pool, maintenance, building projects)	Offices are staffed business hours and the campus safety office is staffed 24/7. The facilities web site offers online request forms for parking passes, work order requests, and fleet vehicle reservations. A monthly facilities newsletter is sent to all campus. Campus standing committees for Parking, Campus and Facilities Planning, Environmental Health, Safety, and Risk Management, and Signage provide input to the vice president for oversight responsibilities for facilities and related services.
Child care (Kids Kastle Little Miner's Clubhouse)	On-campus center serves children from four weeks to ten years old Monday through Friday, 5:45 a.m. to 6:15 p.m. year round. Stipends for parents who are students are available, and an application is offered online.
Faculty and Staff Lounge	The lounge and its kitchen are open during business hours and is overseen by a standing campus committee. Dues are solicited, and a cook is retained to make a variety of cookies that are sold on an honor system. Beverages and snacks are sold on an honor system, and the cash box remains unlocked.

Periodic formal master planning is done to ensure the currency and relevance of support services and facilities. In 2005, the comprehensive campus master plan was reviewed and updated. Since that time, two new buildings and a new dorm have been built and extensive remodeling and expansion work on the student center was completed. An RFP for a facilities master plan that will encompass buildings and land development went out to bid in June 2010 for completion in fall 2010. We anticipate the RFP will go out to bid in June 2010 for completion in fall 2010. The Campus Facilities Planning Committee has broad representation and is actively engaged in defining the scope and goals for our new facilities planning effort.

The School of Mines made a significant investment for the safety and well being of its campus in 2007 when it hired a professional Director of Environmental Health and Safety (EHS). EHS's stated mission is to promote a positive, responsible, integrated safety culture at all levels of the university community. EHS accomplishes its role through education, consultation, and compliance monitoring. Services include emergency management, campus alert system, incident reporting/tracking, risk management, chemistry storeroom, hazardous waste removal, campus training, and sustainability initiatives. The EHS website, along with frequent electronic campus updates, serves as an effective tool for communicating this key support process. EHS serves as the coordinator and primary contact point for campus emergency services and safety.

The School of Mines abides by the Campus Security Act which requires all public and postsecondary institutions to comply with numerous safety and security policies and reporting requirements. Campus crime statistics and other Campus Security Act information are found on the Student Life website. The Facilities Services website provides information related to escort service, emergency services, parking regulations, and vehicle registration.

Safety personnel monitor the campus and work closely with the Director of Environmental Health & Safety and the Rapid City Police Department (RCPD) to enforce community, state, and federal laws. The RCPD headquarters is located only six blocks from campus, and the institution has fostered a longstanding relationship with the RCPD, who serves as our primary law enforcement entity.

The largest campus support group is the Information Technology Services (ITS), which maintains and improves the computing backbone for the institution, as well as providing computing technical assistance. All of the campus has hard-wired and wireless computer access. The wireless access, which was completed during the current review cycle, greatly simplified the process of using the computing facilities of the institution in classes and laboratories.