

TO: Thomas Boyd, Interim Provost
FROM: Faculty Senate, Sub-Committee for Expanding International Opportunities for Students
DATE: 16 December 2016
RE: Expanding International Opportunities for Students

Executive Summary:

In April 2015, Faculty Senate, through a subcommittee, began exploring the status of our international programs, with the goal of facilitating and enhancing undergraduate opportunities abroad. We find:

- Mines faculty and programs generally value international student and research exchanges as important experiences for both students and faculty. Leadership at Mines has evinced an interest in enhancing our efforts in this area, which the Senate supports.
- Vibrant study abroad programs, as well as international internship and research activities, can be promising “signature experiences” for our students, can improve their marketability to employers, and provide a “branding” opportunity for Mines.
- To date, a miniscule fraction of our students has studied abroad. The Mines community – faculty and administration at all levels – would need to undertake concerted efforts to invigorate our offerings and opportunities in this area. Significant barriers and institutional challenges, together with a lack of clear prioritization of internationalization, need to be overcome.
- A Spring 2016 audit of the Office of International Programs (OIP), revealed programmatic, organizational and policy related shortcomings. Some improvements have been made including an addition to staff and the formation of a Study Abroad Peer Advisor program.
- Rigid curriculum flow charts, prerequisite course sequences, determination of equivalent content, determination of credit hours, and administrative difficulties can make it difficult for Mines students to study abroad and earn Mines credit.

More detailed findings are outlined starting on page 2.

Based on these findings, Senate recommends that:

- the *President and the Administration* clearly articulate institutional priority and value of international experiences for students, and provide the necessary support to further this goal (*Recommendations #1-9*);
- *Deans and Department Heads* support curricular changes and recognize faculty initiatives that remove barriers for students seeking a substantive international experience (*#10-13*);
- *Departments and Faculty* focus initial efforts to developing pathways for students in all majors to gain international experience in a way that complements existing curricula, that ideally will include set courses at international institutions that are guaranteed to be accepted at Mines, to reduce student uncertainty (*#14-16*).
- the *Office of International Programs* move forward towards a supportive, well-organized, and competent program (*#17-22*);
- *Student Life, Career Center, and Advising* assist in communicating study abroad opportunities and further internationalization of student experience (*#23-25*)
- *Faculty Senate* will work to support these efforts, including through curriculum and P&T processes (*#26-28*)

Introduction and Rationale:

The Faculty Senate has conducted a year-long investigation into the status of Mines study abroad programs, and opportunities. The Senate's inquiry was led by a subcommittee established in April 2015, co-chaired by Jürgen Brune and Rachel Osgood. It consisted of interviews with students, faculty, administrators, and staff, including especially personnel and programs invested in the internationalization mission; multiple discussions with OIP personnel; review of existing opportunities and resources; exploration of international opportunities at other institutions; breakout sessions at the August 2015 Faculty Conference; and other sources of information, including Mines' "International Studies and Travel Audit Report" from May 2016.

The Committee's main focus was to explore opportunities for promoting and expanding substantive international experiences for undergraduates. The Committee was motivated by the conviction that Mines can and must promote more such opportunities. International experiences should be an important component of our effort "to educate engineers who are broadly educated [and] who see themselves as global citizens," as the National Academy of Engineering put it ("The Engineer of 2020: Visions of Engineering in the New Century," 2004). The NAE notes that since the economy in which our students will work "will be strongly influenced by the global marketplace for engineering services ... the parties that engineering ties together will increasingly involve interdisciplinary teams, globally diverse team members, public officials, and a global customer base."

Accordingly, institutions like Mines must develop strategies to prepare students who are capable of developing and designing systems with a global perspective. This has long been a component of Mines' aspirations. Mines holds out a vision in which graduates "should be capable of working effectively in an international environment, and be able to succeed in an increasingly interdependent world where borders between cultures and economies are becoming less distinct" (Profile of the Mines Graduate).

Yet, the institution has not adequately prioritized the cultivation of such global awareness and understanding, and only so much can be done within the curriculum to prepare Mines students for innovative, responsible, and effective work in the international climate of the 21st Century. Meaningful international experiences, in which students learn by being actively immersed with foreign cultures and practices, are essential. Mines can and must do better.

Committee Findings:

The Committee investigation revealed that there are many faculty and programs supporting the goal of internationalizing Mines students' educational, internship, and research opportunities. The Committee also discovered several recent improvements made in OIP, including; the addition of an experienced Associate Director, the creation of a Study Abroad Peer Advisor program, implementing a new data management software, and updating some expired agreements (MOUs) with partner institutions. These are positive steps.

Still, Mines has an unimpressive track record of promoting study abroad, with only a few dozen students doing so during any given year, as indicated by data requested by the Senate subcommittee. Although record-keeping challenges identified by the institutional audit may have resulted in an underinflation of the numbers tallied below, and an additional proportion of students has had some international experience that

was not a formal exchange, it still appears that a miniscule percentage of our students have participated in exchange programs, and the percentage has remained essentially flat.

Year	Undergraduate Enrollment (common data set)	No. students who studied abroad during the academic year (including summer)	% of undergraduate students
2011	3,946	44	1.1%
2012/13	4,169	44	1%
2013/14	4,293	51	1.2%
2014/15	4,456	54	1.2%
2015/16	4,608	71	1.5%
2016/17	4,566*	69	1.5%

* Based on fall census. Common data set not yet available.

Cultural, administrative, and curricular barriers impede our success and stem from multiple factors, including but not limited to:

- There is no clear statement of mission declaring an institutional priority and value of international study.
- A lack of vision, both at the institutional level and within OIP, combined with overstretched staffing, means that programs and opportunities are often developed on an *ad hoc* basis, with no clear strategy or prioritization.
- There are few foreign study programs regularly offered by Mines, and some faculty have found the current processes too daunting and cumbersome to pursue.
- There are insufficient faculty or advisors who are informed about or actively support study abroad opportunities, or about internships or research programs abroad. Many faculty do not even know that opportunities exist for creating faculty-led programs abroad. This varies widely by department and by college, and there is no clear network or support structure or advisory body. Support for students at programmatic/departmental level is therefore contingent upon the goodwill and engagement of people who are dedicated to the cause of international experiences, notwithstanding weak institutional support.
- Many departments or faculty remain skeptical (in many cases, overly so) about courses and programs at foreign institutions. This suspicion often leads programs to not accept transfer credits or to otherwise discourage students wishing to study internationally. This trend is accentuated by a lack of faith in or frustration with OIP in some quarters, as well as by confusion or perceived inconsistencies with respect to the process for transferring credits for courses abroad.
- The rigidity of the Mines curriculum and the interlocking web of prerequisites often means that a student studying abroad faces the real prospect of “falling behind” by missing a class or two needed to progress in his or her studies. Many students face a choice of either studying abroad or graduating in four years; it is difficult to accomplish both.
- The process for getting courses at foreign institutions approved and accepted is cumbersome and confusing to students. For students, it is a research project and a scavenger hunt for approvals and signatures. After students return, there is often disagreement over the number of credits to be awarded for successful completion of courses abroad. The registrar’s office, OIP, and departments all contribute to these difficulties.

- There are few “easy” pathways for gaining international experience. Historically, students have viewed procedures and staff difficult to navigate.
- There are no institutional incentives for faculty to create and promote international experiences for students: in fact, the institution perhaps unwittingly discourages faculty and programs from creating new international experiences or study abroad courses because such efforts:
 - do not appear to “count” in the annual review process;
 - are viewed as obstacles to tenure or promotion, and in some cases, tenure-track faculty are actively discouraged from pursuing such “distractions”;
 - are not consistently counted as part of the normal teaching load, and typically generate fewer student credit hours;
 - are not recognized as a priority by either departments or the institution as a whole;
 - are sometimes viewed as “perks” or “boondoggles” when in fact they are *very* labor-intensive for faculty to develop, and rewarding for the intellectual development and networking of students and faculty alike;

Additional barriers arise specifically with respect to OIP and Mines support for the office’s mission:

- Historically, students have perceived a discouraging attitude from OIP – one that accentuated obstacles over opportunities – and some students have come away from visits to the office feeling that the barriers are too great to surmount, that there are few opportunities, or that it will be exceedingly “difficult” to study abroad. Faculty have shared similar frustrations with the aloofness, inefficiencies, and communications from the office in years past.
- This has been exacerbated by an institutional culture, both at Mines and within OIP, that focused more on risks to be managed or avoided, rather than opportunities to be pursued. Previous Mines leadership appeared indifferent or inhospitable to international programs and its staff, leading to demoralization within OIP and encouraging a defensive and reactive, rather than creative and proactive, culture.
- This institutionalized culture has had a discouraging and depressing impact on some students interested in studying abroad, many of whom have expressed frustration, even though students who have studied internationally have found their experiences deeply rewarding and impactful.
- The above has recently improved somewhat with the addition of new staff in the office and new leadership at Mines, but the historical legacy remains potent.
- Policies and controls are lacking or ineffective for many procedures, including those for risk management and health and safety, as well as OIP’s own policies. Some policies appear to be developed on ad hoc or reactive fashion, with inadequate consultation with stakeholders, particularly faculty, students, and departments and programs.
- The OIP Audit Management Action Plan has missed some deadlines for compliance and has not included input from the Associate Director.
- Information about study abroad opportunities has been sometimes confusing, contradictory, inaccurate, or outdated, including with respect to partner institutions and curricular options and internal policies. New opportunities and programs are announced periodically (via email or DailyBlast) but often on short notice, not giving students sufficient time to prepare and plan ahead.
- Interpersonal tensions and inadequate staffing may be undermining OIP effectiveness. There appears to be poor cooperation, communication, and coordination between the OIP Director and new Associate Director. The new Associate Director has assumed much of the responsibility for

student mobility (getting Mines students abroad and back, as well as bringing foreign students to Mines) yet is only .8 FTE. Even were this bumped up to 1.0, the demands of this enterprise leave little time for strategic planning.

- Some faculty have reported that these and other challenges (especially with respect to paperwork and visa processing) have also affected graduate students and postdoctoral researchers, with an impact on our research programs, though this was beyond the scope of our inquiry, which was focused on undergraduate experiences.

Institutional Recommendations:

- 1) *Make internationalization an institutional priority.* Mines should set as a strategic priority expansion of study abroad opportunities as a path to fulfilling President Johnson's goal of creating a distinct Mines experience and allowing Mines students to pursue their passions. This should be clearly communicated to college and departmental leadership as well as to faculty. Due to the historical challenges noted above, efforts must be undertaken to signal that times have changed. Ideally, this will be backed up by strong vision statement and, when possible, an actionable strategic plan for internationalization that clearly articulates ambitious but achievable goals a pathway and timeline for achieving them. As an example, the Texas Tech Whitacre College of Engineering, which requires all students to have an international experience, shows that this can be done on an ambitious scale. Mines need not go to this extreme to still have a measurable and positive impact, but it can and must do more.
- 2) *Build institutional consensus around the value of internationalization.* Support this prioritization with consensus-building efforts and professional development for faculty to develop a deeper understanding of the ways in which international education can enhance education in STEM. Department heads especially should be engaged. Communicate clearly to departments and colleges that these activities are valued and should be supported.
- 3) *Provide institutional incentives and inducements for programs and faculty to develop or implement international initiatives.* Any effort must clearly recognize, incentivize, and reward faculty leadership (for both teaching and tenure tracks) in developing foreign study experiences and building collaborative international relationships. Potential conflicts (in perception or policy) with workload or productivity metrics should be addressed to make clear that internationalization is a valued contribution to Mines strategic priorities and will be recognized as such. Incentives may also include release time, course development funds, summer or winter salary, support to attend conferences or workshops that explore the opportunities for international education in STEM, etc.
- 4) *Promote coordination within and between administration and faculty.* Improve coordination especially between registrar, OIP, and degree programs/UGC on curricular matters affecting study abroad, especially substitutions and transfer credits. The registrar, faculty, and OIP should work collaboratively to determine credits for international courses. Establish clear, consistent, and predictable credit-transfer procedures. Perhaps create study abroad council to support.
- 5) *Support both short term and longer duration experiences.* While immersive activities (e.g. over a semester) are preferable, shorter-term experiences over breaks represent valuable opportunities for learning with fewer curricular or other barriers. Explore efforts to remunerate and support faculty for developing short experiences over winter or spring breaks, which do not conflict with internships or field sessions, or during summer sessions, when curricular conflicts are minimized.

- 6) *Develop unified advising plan.* Communication and engagement with students about opportunities is essential. It is vitally important that students plan early in their Mines education for studying abroad. Develop a plan for coordinated communication with students about opportunities and curricular pathways for study abroad, with particular emphasis on the freshmen and early sophomore year, involving CASA, CSM 101, and Student Life as well as academic programs. Support advising at department or college level, as per #12 below.
- 7) *Support and encourage international research opportunities.* Mines Research and Technology Transfer Office may wish to support and encourage faculty to foster international research collaborations that provide undergraduate and graduate students with research opportunities abroad.
- 8) *Value and support OIP.* Leadership and staff need to know that their efforts are highly valued and appropriately supported.
- 9) *International and graduate student experience.* The Committee did not explore in-depth the status of international students or on graduate students, but these obviously are also important, and Mines may wish to conduct a review of processes, procedures, and supports that are in place. Significant input from students and faculty should be part of this review.

College Level and Department Head Recommendations:

- 10) *Recognize faculty internationalization efforts in the review process.* Make clear that faculty will be rewarded, not penalized, for leadership in this area, include a pertinent section on the FDR, and acknowledge value in P&T processes.
- 11) *Promote the value of study abroad.* Lead a culture shift among departments to support new curricular and faculty initiatives that remove barriers to study abroad. This will require a trade off by faculty to accept students taking courses outside of Mines.
- 12) *Provide advising support.* Each college (*or department*) should have an advisor who is knowledgeable about study abroad programs within each degree program to advise students on curricular matters and direct students to ideal pathways.
- 13) *Provide leadership and support to departments in the recommendations below.*

Departmental and Faculty Recommendations:

- 14) *Each department should work with OIP to develop at least one “ideal pathway” for study abroad.* This process should include identifying the ideal time for students to study abroad in that major, identify at least one partner institution or program that can be developed and offered regularly, and identifying a suitable curricular path that will transfer seamlessly to Mines.
 - Ideally the path will not conflict with field session or domestic internships in the summer after junior year.
 - Such programs should include courses that have been pre-approved to be accepted at Mines, to reduce uncertainty and advance predictability.
 - Sophomore year opportunities (or summer between sophomore and junior year) are particularly worthy of exploration to the extent Mines core requirements can be fulfilled elsewhere.
 - For some majors, it may be desirable to create an “international semester” with a curriculum that matches flow-chart restrictions with one or two trusted institutional partners.

- An international field session may be an option to explore.
 - Possibly develop a tailored flowchart to keep students on track.
 - International studies faculty in LAIS may be able to offer complementary curricular support in humanities and social sciences.
- 15) *Develop curricular support.* Work with OIP to identify course substitutions that are manageable with partner schools for each degree program. Pre-approve courses at a range of institutions when possible.
- 16) *Promote faculty-led programs.* As per #5 above, develop and incentivize short study abroad programs for students, led by Mines faculty.

Office of International Programs Recommendations:

- 17) *Support departments and programs in the above.* Prioritize the development of “ideal pathways” in #14. Communicate regularly and actively with departments and faculty.
- 18) *Revitalize office culture.* Develop supportive culture of “you can do it” in OIP. Shift from a “risk” culture to an “opportunities” culture. Develop a collaborative leadership model to supplant restrictive “command and control” and siloed approach.
- 19) *Plan strategically.* Develop a plan with actionable and achievable goals, over a realistic timeline, to gradually build up sustainable study abroad opportunities that mesh with Mines curricula, with the requisite support structure. Use this plan to evaluate and measure the success of the program.
- 20) *Promote positive and stable relations with key partner institutions.* Strengthen and resolve problems with current and previous partner programs that have been historically beneficial to Mines students. Programs that have worked in the past should be maintained when possible, leveraging longstanding relationships to build recurring programs. Explore new relationships with other international partners that can provide accessible pathways for Mines students to gain international experience.
- 21) *Create an effective Study Abroad Advisory Committee.* Include faculty, staff and students who are supportive of expanding international opportunities for students. This committee might be utilized as a network for students seeking information, advising, and approvals for study abroad opportunities.
- 22) *Consider organizational changes.* Consider moving the coordination of student scholarships out of OIP as the missions are unrelated. Consider keeping OIP and ISSS departments separate as the two purposes are clearly distinct. Consider changing OIP name to “Education Abroad Office” or “Study Abroad Programs Office” which are in line with best practices at peer institutions.

Advising, Career Center, and Student Life Recommendations:

- 23) *Work with OIP and degree programs to advise and communicate study abroad opportunities, as well as international internships and research experiences, to students.* Integrate into CSM 101 and CASA programming, particularly as progress is made on recommendation #14 above.
- 24) *Develop or enhance student life activities on internationalization.* Explore integrating international themes into existing events or create new events (with OIP) on internationalization, educate residential staff on international opportunities and support structures, consider creating international Themed Learning Communities incorporating a study abroad component (perhaps at the end of the freshmen year).

25) *Develop and promote opportunities for internship and research opportunities abroad.* Explore, through the Career Center, OIP, RTT, and potential third-parties, opportunities for international professional or research experiences for students.

Faculty Senate will undertake the following to support these efforts:

- 26) Review and update as needed promotion guidelines to acknowledge clearly and unequivocally the value of international teaching, program development, and collaboration.
- 27) Provide support to Department Heads and faculty in articulating the value of and developing substantive international experiences.
- 28) Work with Undergraduate Council to approve curricular changes and approvals needed to support the above.

The Faculty Senate voted unanimously to approve the recommendations above at its meeting on December 13, 2016.