

International Mining Education Collaboration

Planning Session

(follow-up to international education workshop held at
Salt Lake City, USA in March 2005)

SOMP - Ankara, Turkey
13 June 2005

WORKSHOP AGENDA

(Professor Bruce Hebblewhite – UNSW, Australia)

- Workshop objectives
- Possible collaborative opportunities.
- Status of formation of “IMEN” at SME2005
- Resource sharing
- Student exchange/alternative entry
- Collaborative degrees/web-based options
- Wrap-up and agreement on the way forward.

A global mining industry needs a global education sector

- Educational collaboration
- Partnering with industry
- To do nothing is not an option, if we want to have a future, and if the industry continues to need graduates!!

Workshop Objectives

To gather interested international mining engineering educators and supporting industry personnel together:

- to explore opportunities for greater degree of international collaboration through an educational network – “International Mining Education Network” (IMEN) – amongst English-speaking educational providers.
- to identify and review a range of collaboration options and the opportunities that they present;
- to determine practicalities/limitations of various options;

Workshop Objectives (cont'd)

- to determine which parties/institutions might be interested in each option – assemble a project team;
- to commence developing strategies and action plans for each option;
- to discuss levels and types of resources required for each collaborative option – both between institutions and amongst the mining industry;
- to agree on a way forward in developing a business plan for new initiatives, including development of a collaborative approach to industry for strategic support.

Possible opportunities

- Resource sharing
 - Staff resources
 - Educational teaching/learning materials
- Enhanced student exchange
(incorporating greater cross-recognition of educational programs – undergrad. and postgrad.)
- Alternative entry programs
 - Access to students from areas where there is no longer a Mining Program
 - Non-standard Programs (eg Certificates/Diplomas)
- Collaborative degrees – an international Mining degree or other qualification, with components completed at one or multiple institutions (a combination of the student exchange and alternative entry issues above)
- Use of commercial internet providers to disseminate/manage resource material.

SME2005 Workshop

- Held at Salt Lake City – March, 2005
- Agreed to form the **International Mining Education Network (IMEN)**, and move forward to develop strategic business plan to put to international mining industry

SME2005 workshop participants

- Bruce Hebblewhite University of New South Wales Australia
- Mike Hood University of Queensland Australia
- Kevin Tuckwell Minerals Council of Aust. Australia
- James Taranik Mackay School of Earth Sc & Eng USA
- Hans de Ruiter TU Delft The Netherlands
- Michael Karmis Virginia Tech USA
- Navid Mojtabai New Mexico Tech USA
- Dirk van Zyl Mackay School of Earth Sc & Eng USA
- Rick Sweigard University of Kentucky USA
- Vladislav Kecojevic Penn State University USA
- Kim McCarter University of Utah USA
- Mario Cedron Catholic University of Peru Peru
- Rafael Rubio Madrid School of Mines Spain
- Wayne Pennington Michigan Tech USA
- Lee Saperstein University of Missouri-Rolla USA
- Benjamin Calvo Madrid School of Mines Spain
- Malcolm Scoble University of British Columbia Canada

Resource sharing options

- sharing of existing course teaching material (or modules within courses) via internet or other means, in fields where an institution is short of expertise or availability of resources/time
- “specialist” staff available for international intensive block teaching sessions (co-ordinated between multiple institutions in a region, eg a 3 week trip with multiple 4 or 5 day block sessions to different institutions across a region by a subject matter expert could be cost effective to all parties)
- extended staff exchange programs (eg 3 – 6 months)
- secondment of experienced industry personnel to one or multiple institutions in a region for extended periods.

For each of the above and any other identified options, develop responses to the following:

1. *What would be the clear objectives of such an initiative?*
2. *What are the anticipated benefits if the objective can be achieved (benefits to the institutions (individually and collectively), to the industry, to the students)?*
3. *What are the major issues and obstacles that would have to be overcome (must be a win-win for both/all parties, on sound commercial basis)?*
4. *Which institutions are interested to be a part of pursuing this collaborative option?*
5. *What are the major strategies to be developed for taking this option forward?*

In relation to the option of sharing existing teaching resource material, list the current subject matter material available, offered by whom; in what form; and who has a need for such material?

In relation to sharing of teaching staff expertise, identify both areas of strength and weakness where you could provide or might take external expertise to teach a module or course?

Student exchange/alternative entry

Options considered:

- greater cross-recognition of educational programs (undergraduate)
- formal exchange agreements
- informal options
- marketing of exchange opportunities
- recruitment of students from regions where there is no mining program available
 - into 1st year
 - into later years
- cross-over from other disciplines (eg civil)
- non-standard programs (eg certificates/diplomas)

Collaborative degrees/web-based options

- existing degree programs (undergraduate or postgraduate) which are already packaged in a portable form (eg web-based distance mode) that could be “code-shared” with other institutions
- new degree program (u/grad or p/grad) that could be an international degree with either options or structured components available at different institutions around the world (eg European Mining Program, UBC Mining Certificate etc)

Use of “third-party” internet providers

- use of commercial internet providers to disseminate/manage resource material/possibly to provide/assess entry level pre-requisites

Wrap-up / a way forward

- Summary of agreed opportunities
- Interested parties (rel. to each opportunity)
- Next tasks to be pursued
- Project teams for each task
- Secretariat for pooling and disseminating progress
- Timetable?

Overall conclusions

- Agreed to form the International Mining Education Network (IMEN)
- Identified the importance of forming “Networks of Excellence”
- Recognition of need for supporting collaboration and networks for R&D to ensure development of future academics

IMEN Strategic Plan

- Agreed to develop a well-constructed strategic plan for international educational collaboration, with a view to collective partnership with major industry partners
- Formed an IMEN Steering Committee, to take this forward
 - B Hebblewhite (Australia)
 - K Tuckwell (Australia)
 - H de Ruiter (The Netherlands)
 - M Karmis (USA)
 - J Taranik (USA)
 - M Scoble (Canada)
 - M Cedron (Peru)
- Agreed to present workshop summary to Soc. Of Mining Professors in Ankara – June, 2005

Input to IMEN

If you wish to make input to the IMEN information gathering process, or for further information, please contact:

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