

6 March 2025

Committee Secretariat
Senate Education and Employment Committee

By email: eec.sen@aph.gov.au

Dear Committee

Re: Inquiry into the quality of governance at Australian higher education providers

Thank you for the opportunity to provide a submission as part of the Committee's inquiry into higher education governance in Australia. I write on behalf of the Australasian Institute of Mining and Metallurgy (AusIMM), which is the peak body representing professionals in the resources sector. Our objective in this submission is threefold:

1. **Industry context:** To highlight changes in occupational demand and skills shortages, along with the need to grow capability across the minerals value chain, as key factors in any consideration of higher education governance impacting the resources sector.
2. **Higher education pathways:** To outline the opportunity to expand pathways for Australians to enter the Australian resources sector in advanced vocational, para-professional and professional roles, and the implications for provider governance.
3. **Course viability and the minerals education experience:** To share examples from the resources sector demonstrating the challenges facing Australian higher education broadly, and the implications for provider governance.


We provide further detail and recommendations on these three areas overleaf.

AusIMM was established in 1893 and operates under Royal Charter to advance the resources sector for the benefit of the community. Our 15,000 members work across more than 110 countries in disciplines ranging from engineering and geology through to environmental science, technology, chemical processing, law, finance and management.

Drawn from across industry, government and academia, our members operate at the intersection of the higher education system and the mining sector, granting our association a unique perspective on both the managerial and research imperatives that drive Australia's vocational and tertiary institutions.

We welcome the opportunity to provide further insights to the Committee on the matters raised in this short submission. On this, I encourage the Secretariat and Committee to liaise directly with our Senior Manager for Government Relations, Harry Turner, who can be reached at hturner@ausimm.com.

Our thanks and best regards



Stephen Durkin FAusIMM, CEO

RECOMMENDATIONS

AusIMM's key recommendations to the Committee are:

Recommendation 1: Providers implement governance structures that directly incentivise management and academic staff to:

- Engage industry in curriculum and course design (at all levels of the Australian Qualification Framework).
- Deliver courses that meet defined industry needs based on clear projections (particularly including those procured by Jobs and Skills Australia)
- Prioritise industry-embedded training, education and research programs (including those facilitated through industry-research partnership organisations).
- Develop skills for lifelong learning and career mobility, consistent with the distinct purposes of vocational, tertiary and higher research programs.
- Reflect recognised skill and labour shortages, as per authoritative data sources such as Jobs and Skills Australia.

Recommendation 2: The Tertiary Education Quality and Standards Agency (TEQSA) develop a standardised report monitoring the effectiveness of Higher Education Providers' efforts to support core student outcomes, ensure industry relevance and meet course quality benchmarks.

Recommendation 3: TEQSA engage with professional associations to consider how sector-specific course recognition programs can be utilised as a supplementary assurance of course quality and relevance, and how these assessments can be effectively communicated to prospective students.

Recommendation 4: Government and Higher Education Providers join with the resources industry to undertake a scoping study on the expansion (and recognition) of qualification options including Vocational and Associate Degrees, Undergraduate Certificates and Higher Apprenticeships, leveraging case studies from our sector to define opportunities for the broader education and training system. This assessment should include a consideration of how modular components from several qualification types can be combined and recognised.

Recommendation 5: TEQSA develop specific governance standards to support the expansion of Vocational Associate Degrees, Undergraduate Certificates and Higher Apprenticeships and ensure effective 'and proactive disclosure' to students and employers.

Recommendation 6: All Higher Education Providers delivering mining-related programs ensure their governance bodies include individuals with relevant industry experience, or that appropriate structures are established to gather industry input on the design and delivery of courses to meet industry needs.

Recommendation 7: Government support the development of cross-disciplinary teaching and research hubs focused on strategically important sectors. These hubs should:

- Integrate expertise from diverse disciplines to address complex challenges.
- Foster strong partnerships with industry to ensure research relevance and facilitate skills development aligned with industry needs.
- Promote collaborative, interdisciplinary research that translates into skills development.
- Offer flexible education and training programs.
- Operate with transparent governance structures.

The sections that follow provide further detail to inform these recommendations.

Industry context: Challenges facing the resources sector

The resources sector faces the dual challenge of meeting current high demand for vocational and tertiary-qualified workers while building a pipeline of professionals with future-focussed skills in areas such as technology, automation, materials processing and manufacturing.

We need governance structures that incentivise higher education providers to provide courses that align with industry needs today and equip graduates with technical knowledge and capacity to build and adapt continually throughout their careers. Ultimately, this will maximise mobility across the increasingly integrated energy, resources and manufacturing value chain.

Consider the following in relation to demand for skilled professionals and labour in the resources sector:

- Australian mining faces significant and acute workforce shortages, second only to the construction sector in 2024.
- Approximately 24,000 new mining workers are needed by 2026 – analysis by Victoria University for Jobs and Skills Australia indicates an annual growth rate of 18.8% over the ten years to 2028.
- The industry's vacancy rose to 5.2% as of late 2023, highlighting the urgent need for both vocational and tertiary-qualified labour.
- The sector has a high demand for skilled professionals and labour compared to the broader Australian economy – 66% of the Australian mining workforce holds a Certificate III level qualification or higher and more than 25% hold a Bachelors degree qualification or higher.
- Shortages are particularly pronounced in the Pilbara and Bowen Basin – gold and coal mining are experience acute shortages.
- Mining Engineers are still in shortage across 8 out of 9 Australian states, while miners experience regional shortages in 6 states.

In relation to student, staff and graduate experience with Australian Higher Education Providers delivering mining-related courses, we note:

- There is significant concern across the sector regarding the cancellation or substantial restructure of low-demand / high-criticality courses in specialised areas such as mining engineering, mining, geology, metallurgy, earth sciences and materials engineering.
- Jobs and Skills Australia has identified these areas as being subject to national skills shortages today, and project that they will grow substantially over coming years – the projected annual growth rate for these professions is approximately 23% over the ten years to 2028.
- That a focus on student / academic teaching staff ratios and financial margin contributions (as criteria driving course reviews) ignores or inadequately accounts for the value generated by these courses in terms of student outcomes, meeting critical industry needs and delivering associated benefits to the economy and community.
- Students and new professionals entering the sector consistently report that this uncertainty, including the prospect of major restructures for mid-degree students, is a disincentive for students pursuing specialist mine qualifications – this of course exacerbates the challenge.

Professional pathways and course recognition: A whole-of-career approach

Higher Education Providers should implement governance and performance frameworks that demonstrate a clear response to the challenges facing sectors like resources, energy and manufacturing, which require a combination of established and emerging skillsets.

In the resources sector, there are numerous case studies of novel approaches to the development and delivery of courses that meet immediate industry needs, while preparing students for lifelong learning and professional development. An ideal pathway involves an 'all of the above' approach to course availability, coupled with clear post-completion pathways to develop and be recognised for holding and maintaining in-demand skills.

Industry, universities and education providers have organised at the institutional level through bodies including AusIMM, the Australian Network of Mining Engineers and Educators (ANMEE) and Australian Mining and Automotive Skills Alliance to guide the development and delivery of programs that respond to this industry dynamic.

Bodies such as AusIMM play an important role here, delivering an independent course recognition framework for the sector, and delivering ongoing professional development and recognition for some 15,000 professionals across the sector.

Our course recognition program helps current and prospective students make well-informed decisions about their education. Recognised courses have been reviewed by AusIMM committees and endorsed by the AusIMM Board as providing an appropriate level of education for students. Graduates of these courses are guaranteed eligibility to apply for Associate, Member and Fellow grades of AusIMM membership, with the appropriate level of experience, in turn providing a clear pathway for professional recognition within the sector.

There is an opportunity for the TEQSA to consider industry-led course recognition frameworks as a supplementary framework to provide assurance for students regarding the quality and industry-relevance of courses.

Another emerging area of focus for the resources sector is the opportunity to expand the range of vocational, para-professional and professional qualifications available to students over the course of their careers. Qualifications at the AQF 6 and 7 levels can play an important role here, and AusIMM and our industry partners note the success of programs including:

- The University of Southern Queensland Associate Degree of Engineering (Mining Engineering), which allows vocationally-qualified students to complete two years of study and gain an industry-recognised (and co-developed) tertiary qualification.
- RMIT University's Higher Apprenticeship in Mechanical Engineering, which combines elements of vocational (Adv. Diploma) and tertiary (Undergraduate Degree) courses.
- The Universities of Queensland, New South Wales, Curtin and Monash offer majors and postgraduate programs to support students seeking specialist skills relevant for the resources sector, as part of overarching programs that ensure breadth of skills.

We commend these case studies to the Committee as examples where governance and decision-making models across Australian Higher Education Providers have benefitted from:

- Course design undertaken with industry and students.
- Clear and ongoing communications regarding course delivery and status.
- A balanced and pragmatic approach to developing broad discipline-specific and narrow industry-relevant skills throughout a student's academic career,
- Integration with industry programs, including those AusIMM deliver, to ensure students receive practical exposure to work in sectors of interest as they study.