



Reaction to the ASIIN Evaluation Report: New MCAST Engineering Degree Programmes

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Background

The Evaluation Report (First Interim Report) of the new MCAST Bachelors of Engineering programmes (Control Engineering, Electronics Engineering, Mechanical Engineering (Plant) and Mechanical Engineering (Manufacturing)) , as prepared by the ASIIN Consult, was received by the Chamber of Engineers (CoE) on 24th November 2020 with feedback requested by the Engineering Profession Board (EPB) by 8th December 2020. As one of the stakeholders, the CoE is hereby providing feedback on the report as the body representing engineering professionals in Malta.

The CoE notes positively that ASIIN consult state a general note of satisfaction that these new programmes truly aim to address the deficiencies identified in the previous engineering courses. On the other hand a number of guiding questions adopted by the peers during the review remain unanswered or not answered to satisfaction by MCAST. The guiding questions adopted draws from the previous follow-up report to ensure that previously identified recommendations were addressed. The CoE understands that MCAST will present its position as to how the identified requirements and recommendations will be addressed moving forward.

In this response, the CoE takes the opportunity to comment on some aspects of the report to ensure that the engineering community is aligned with these proposals from the expert panel. This report presents the CoE's position as regards these interim conclusions by the consultants.

On the Requirements

The ASIIN consult has highlighted that more information is being requested from MCAST regarding the degree programmes under review. The requested information, in terms of study-unit specific details, student statistics, rules and regulations and staff-related details are very pertinent for the programme review, and while the CoE agrees with the observations, it would be beneficial if all stakeholders are made aware of this information once provided to fill-in the request.

Further to the above, the consultants have laid down multiple requirements, the vast majority of which apply to all degree programmes in scope. The following key points constitute the position of the CoE on these requirements:

1. The evaluation report shows that the peers are delving into meticulous detail in the programmes' material. Therefore, the fact that crucial information is still missing, means that course documentation needs to be remediated. The CoE asserts that any statements made in the study unit documentation needs to be substantiated with evidence. This evidence should by now be available given that 2 years of these degree programmes were completed by July 2020 and hence all data from that experience should be made available to ASIIN in order to consolidate the review. This information should also be made available to the CoE to enable it to better assess the new degree programmes.



2. The ASIIN consult made some concerning observations regarding lack of clarity in the course admission system. To their concerns about the alignment of the two streams of intake (i.e. A-level route and MCAST route), programme coordinators state that after the first year the two input streams are getting on the same level. Again, this case needs to be evidenced based on these two years of experience
3. The consultants observe that past HND and HD students may undergo an Accreditation of Prior Learning (APL) exercise but it is not clear whether these are exempted from any study units along the way. The consultants also seek further clarification as to whether it is still possible for the holder of a full level 5 Higher Diploma issued by MCAST to access directly to a third year of the level 6 programmes subject to validation by the Admission board. This needs to be clarified unambiguously by MCAST as any short cuts to the current 4 year structure of the 240ECTS will lead to a situation like the one concerning the previous courses. The CoE feels it is not acceptable to repeat mistakes.
4. The reports does not show clearly whether the consultants had unrestricted access to assessment methods and examination methods in order to clearly understand how learning outcomes are being absorbed by students. The CoE understands that examination papers need to be provided to show both the questions and engineering problems posed and also the answers being presented by the students. This is to ensure that the examination material is commensurate with the study unit content. There should be no censoring in this exercise and the consultants should be presented with sample answers from students across the entire range of academic performance.
5. The CoE notes that the same ASIIN consult has again observed a lack of resources, both in the area of laboratories' equipment and staffing to sustain the practical part of the engineering programmes and also in terms of human resources, such as lecturing staff and research staff. The CoE here reflects whether resources for academic engineering tuition in Malta is being spread too thin. Nevertheless, MCAST needs to remedy the situation given that this observation has also been made in the 2017 follow-up evaluation. Since the course has been initiated hastily and is now already in its third year, this situation is concerning especially with the first cohort experience.
6. The CoE wholeheartedly agrees with the consultants' requirement for MCAST to provide adequate information to the students about the Engineering Warrant and the requirements and procedure for the entitlement to the Engineering Warrant of graduates of the new MCAST B.Eng.(Hons) degree programmes. Students, have in the past suffered due to lack of information or mis-information and therefore that is a situation which cannot be afforded once more. In this regard, the CoE have made it clear to MCAST that the prospectus needs to be updated to clarify that the requirements subjected for entitlement of the warrant includes specifically this review process. Failure to comply will keep students from understanding the full implications of the course vis-a-vis the entitlement to the warrant. The CoE hopes that by now their is sufficient maturity to ensure lessons learnt are put into practice.



On the Recommendations

The consultants have also proposed a smaller number of recommendations, the vast majority of which apply to all degree programmes in scope. The following key points constitute the position of the CoE on these recommendations:

1. The ASIIN consult recommends that the specialised streams of the respective mechanical and electrical programmes are integrated into one (i.e. from 4 courses to 2 courses) to improve the allocation of resources. The CoE also agrees that this should be strongly considered by MCAST given that the consultants' feedback shows a level of struggle in terms of resourcing. The specialisation streams can either materialise later in the course, such as of Year 3 onwards or alternatively specialisation can happen within the course itself by allotting students with multiple dedicated elective units.
2. Another endorsed recommendation is the empowerment of teaching staff to engage further in research activities and to participate more in the curriculum design and development process. This recommendation goes hand in hand with the requirement to increase resourcing for the programmes across the board, because through causality, the lecturing staff seem very limited from engaging into activities which sustain their academic portfolio. The CoE believes that increasing allocation for research time and academic development will ultimately reflect on the students' experience in the engineering course and also the quality of the programmes themselves. Taking a high-level point of view, resourcing needs to be tackled very attentively as it has a downstream impact on the students and course output.
3. The consultants also suggested to enlarge student's skills and competences with respect to social, legal and ethical aspects of the engineering profession. The CoE agrees and promotes the addition of non-technical subjects which address the economic, social and environmental spheres. These subjects are additional tools to prepare the engineer to operate effectively as a professional in society.

Closing Remarks

The key points stated above address our organisations' observations. The CoE agrees with the remainder items addressed in the more exhaustive evaluation report¹ and therefore have no additional commentary to make prior to receiving the remedial responses from MCAST.

The CoE is in high respect of the ASIIN consult's approach that the focal point of this evaluation assignment is whether the "new" MCAST engineering degree programmes adequately address the

¹ Evaluation Report (First Interim Report) of the new MCAST Bachelors of Engineering programmes, ASIIN, 14-Nov-2020.



weaknesses identified in the 2016 and 2017 evaluations. Therefore, the expectation of this review process is that MCAST presents to necessary evidence to show that the deficiencies are being unequivocally addressed, and furthermore any ambiguities or unclarity arising in this review process are addressed at the core.

The eligibility of the new MCAST Degree Programmes, as sufficient academic qualification for the engineering profession warrant, remains under ongoing review which needs to review each of the 4 years of the degree programmes after completion.