

Assessment report
Limited Framework Programme Assessment

Master Systems and Control

Delft University of Technology

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1. Executive summary

In this executive summary, the panel presents the main considerations which led to the assessment of the quality of the Master Systems and Control programme of Delft University of Technology, which has been assessed according to the standards of the limited framework, as laid down in the NVAO Assessment framework for the higher education accreditation system of the Netherlands, published on 20 December 2016 (Staatscourant nr. 69458).

The panel is positive about the cooperation between the Master Systems and Control programmes of the three Dutch Universities of Technology, since this cooperation may be beneficial for the contents of all three programmes.

The Delft University of Technology programme is regarded by the panel to be adequately organised and managed. The panel notes with approval lecturers of other Faculties than the Faculty of Mechanical Maritime and Materials Engineering contribute to the programme, this reinforcing the multidisciplinary character of the programme.

The programme objectives are very appropriate descriptions of the systems and control domain and very adequately delineate the goals about the students' knowledge and skills at completion of the programme. The panel is pleased to note the objectives meet international standards, as exemplified by the correspondence of the objectives with the International Federation of Automatic Control (IFAC) report. The panel welcomes the benchmark study conducted by the three Dutch Master Systems and Control programmes and observes these programmes to be aligned with well-respected programmes in this domain abroad.

The programme remains abreast of trends and developments in the professional field through regular meetings with the Professional Field Board and through cooperation with organisations in the field.

The panel regards the intended learning outcomes of the programme elaborate and well-phrased, being the adequate operationalisations of the programme objectives and meeting the master programme level. The panel suggests to broaden the intended learning outcomes with aspects of signal processing, communication and computation.

The panel is very appreciative of the curriculum. The contents of the courses are relevant and the level of the courses is distinctly very high. The panel considers the curriculum coherence to be up to standard, being composed of core courses, elective courses, and the graduation project. The panel considers the core programme to be very appropriate to introduce students to the fundamentals of the domain. Domain-independent modelling may be strengthened. The panel advises to ensure all students being introduced to the multidisciplinary dimensions of the systems and control domain. In addition, the panel suggests to reinforce academic skills, such as presentation and writing skills. The panel also proposes to give more weight in the curriculum to elements of social and ethical awareness. Furthermore, the panel suggests to schedule opportunities for students to spend part of the curriculum abroad.

The panel regards the lecturers to be very good researchers in this domain with excellent research track records. The lecturers refer to their research in the classes. The panel welcomes the cooperation of the Master Systems and Control programmes in the DISC Research School. The panel considers the lecturers to be good teachers, as the proportion of lecturers being BKO-certified shows. The panel notes students to be very positive about the lecturers. The panel suggests to monitor the lecturers' workload and supports programme management intentions to recruit new staff.

The admission requirements and procedures are very much up to standard, being very strict and admitting students who may be regarded to have a fair chance of completing the programme. The panel welcomes the programme requiring students to remedy any deficiencies prior to enrolment.

The panel appreciates the study methods adopted in the programme. The panel also is positive about the study guidance by the supervisors. The panel recommends to monitor the study load, as this may at some points be too demanding.

The panel is positive about the material facilities and the laboratories of the programme.

The panel considers the examinations and assessments rules and regulations of the programme to be very much up to standard, complying with Faculty policy statements and frameworks. In addition, the panel approves of the position and the responsibilities of the Board of Examiners.

The examination methods are adequate, as these meet the course goals and course contents. The panel is positive about the multiple examinations scheduled in most courses. In addition, the panel regards the assessment of group examinations to be adequate. The panel is impressed by the wide-ranging measures taken to promote and ensure the validity of the examinations, the reliability of the assessments and the transparency of the examinations.

The programme ensures the research orientation of industry-related graduation projects. The supervision of the projects is done very appropriately, as students confirmed. The panel especially welcomes the conscientious assessment of the graduation projects by the broadly composed Graduation Committees. The rubric for the assessments includes relevant assessment criteria.

The examinations of the courses, the panel studied, are up to standard. The grades given to the graduation projects by the programme examiners are fully endorsed by the panel. The projects reviewed by the panel exhibited good quality with respect to the subjects investigated and in terms of the results achieved. In addition, the graduation projects were especially good from the methodological perspective.

The panel considers the graduates of the programme to be very knowledgeable about and very skilled in this domain and to be very well prepared for the labour market. The career prospects of the graduates are very good, if not excellent. The panel noted the graduates to be able to apply their knowledge and skills both in positions in the professional field or as PhD students.

The panel which conducted the assessment of the Master Systems and Control programme of Delft University of Technology assesses this programme to meet the standards of the limited framework, as laid down in the NVAO Assessment framework for the higher education accreditation system of the Netherlands, judging the programme to be good. Therefore, the panel recommends NVAO to accredit this programme.

Rotterdam, 28 September 2018

Prof. dr. A.J. van der Schaft
(panel chair)

drs. W. Vercouteren
(panel secretary)

2. Assessment process

The evaluation agency Certiked VBI received the request by Delft University of Technology to manage the limited framework programme assessment process for the Master Systems and Control programme of this University. This objective of the programme assessment process was to assess whether the programme would conform to the standards of the limited framework, as laid down in the NVAO Assessment framework for the higher education accreditation system of the Netherlands, as published on 20 December 2016 (Staatscourant nr. 69458).

Management of the programmes in the assessment cluster WO 3TU Systems and Control convened to discuss the composition of the assessment panel and to draft the list of candidates.

Having conferred with management of the Delft University of Technology programme, Certiked invited candidate panel members to sit on the assessment panel. The panel members agreed to do so. The panel composition was as follows:

- Prof. dr. A.J. van der Schaft, professor in Mathematics, Johann Bernoulli Institute for Mathematics and Computer Science, University of Groningen (panel chair).
- Prof. dr.-ing. J. Lunze, professor and head of Institute of Automation and Process Control, Ruhr-University Bochum, Germany (panel member).
- Prof. dr. P.R.J. Simons, professor emeritus and former director of IVLOS Institute of Education, Utrecht University (panel member).
- Ir. R. van der Groep, business development manager, Siemens Nederland NV (panel member).
- M. Poot BSc, student Master Systems and Control, Eindhoven University of Technology (student member).

On behalf of Certiked, drs. W. Vercouteren served as the process coordinator and secretary in the assessment process.

All panel members and the secretary confirmed in writing being impartial with regard to the programme to be assessed and observing the rules of confidentiality. Having obtained the authorisation by the University, Certiked requested the approval of NVAO of the proposed panel to conduct the assessment. NVAO have given their approval.

To prepare the assessment process, the process coordinator convened with management of the programme to discuss the outline of the self-assessment report, the subjects to be addressed in this report and the site visit schedule. In addition, the planning of the activities in preparation of the site visit were discussed. In the course of the process preparing for the site visit, programme management and the Certiked process coordinator regularly had contact to fine-tune the process. The activities prior to the site visit have been performed as planned. Programme management and the process coordinator drafted the site visit schedule.

Well in advance of the site visit date, programme management sent the list of final projects of graduates of the programme of the most recent years. Acting on behalf of the assessment panel, the process coordinator selected 15 final projects. The grade distribution in the selection was ensured to conform to the grade distribution in the list, sent by programme management. Additional criteria have been taken into account, if these had been found to be relevant for the programme.

The panel chair and the panel members were sent the self-assessment report of the programme, including appendices. In the self-assessment report, the student chapter was included. In addition, the expert panel members were forwarded a number of final projects of the programme graduates, these final projects being part of the selection made by the process coordinator.

A number of weeks before the site visit date, the assessment panel chair and the process coordinator met to discuss the self-assessment report provided by programme management, the procedures regarding the assessment process and the site visit schedule. In this meeting, the profile of panel chairs of NVAO was discussed as well. The panel chair was informed about the competencies, listed in the profile. Documents pertaining to a number of these competencies were presented to the panel chair. The meeting between the panel chair and the process coordinator served as the briefing for panel chairs, as meant in the NVAO profile of panel chairs.

Prior to the date of the site visit, all panel members sent in their preliminary findings, based on the self-assessment report and the final projects studied, and a number of questions to be put to the programme representatives on the day of the site visit. The panel secretary summarised this information, compiling a list of questions, which served as a starting point for the discussions with the programme representatives during the site visit.

Shortly before the site visit date, the complete panel met to go over the preliminary findings concerning the quality of the programme. During this preliminary meeting, the preliminary findings of the panel members, including those about the final projects were discussed. The procedures to be adopted during the site visit, including the questions to be put to the programme representatives on the basis of the list compiled, were discussed as well.

On 14 June 2018, the panel conducted a site visit on the Delft University of Technology campus. The site visit schedule was in accordance with the schedule as planned. In a number of separate sessions, panel members were given the opportunity to meet with Faculty Board representatives, programme management, Board of Examiners representatives, lecturers and final projects examiners, students, and alumni and professional field representatives. In addition, the panel was given a tour around the programme facilities and laboratories.

In a closed session at the end of the site visit, the panel considered every one of the findings, weighed the considerations and arrived at conclusions with regard to the quality of the programme. At the end of the site visit, the panel chair presented a broad outline of the considerations and conclusions to programme representatives.

Clearly separated from the process of the programme assessment, the assessment panel members and programme representatives met to conduct the development dialogue, with the objective to discuss future developments of the programme. The development dialogue was conducted together with the Master Systems and Control programme management of University of Twente and Eindhoven University of Technology.

The assessment draft report was finalised by the secretary, having taken into account the findings and considerations of the panel. The draft report was sent to the panel members, who studied it and made a number of changes. Thereupon, the secretary edited the final report. This report was presented to programme management to be corrected for factual inaccuracies. Programme management were given two weeks to respond. Having been corrected for these factual inaccuracies, the Certiked bureau sent the report to the University Board to accompany their request for re-accreditation of this programme.

3. Programme administrative information

Name programme in CROHO: M Systems and Control
Orientation, level programme: Academic Master
Grade: MSc
Number of credits: 120 EC
Specialisations: N.A.
Location: Delft
Mode of study: Full-time (language of instruction: English)
Registration in CROHO: 21PF-60359

Name of institution: Delft University of Technology
Status of institution: Government-funded University
Institution's quality assurance: Approved

4. Findings, considerations and assessments per standard

4.1 Standard 1: Intended learning outcomes

The intended learning outcomes tie in with the level and orientation of the programme; they are geared to the expectations of the professional field, the discipline, and international requirements.

Findings

The Master Systems and Control programme is the result of the collaboration between 4TU, being the Dutch Universities of Technology. Although the Master Systems and Control programmes of Eindhoven University of Technology, Delft University of Technology and University of Twente now differ, the programmes share a number of features, such as common core courses and lectures to be taken by students of all three Universities. The Universities maintain close contacts and meet regularly to discuss the programmes.

The Master Systems and Control programme is one of the programmes of the Faculty of Mechanical, Maritime and Materials Engineering of Delft University of Technology. On behalf of the Dean of the Faculty, the director of education is responsible for the education policies, processes and quality within the Faculty. The director of studies, assisted by the master coordinator manages the programme on a day-to-day basis. The Board of Studies, being composed of lecturers and students, advises programme management on the programme quality. The Board of Examiners for the programme has the authority to supervise the examinations and assessments of this and a number of other programmes of the Faculty. Although the programme is part of the Faculty mentioned, lecturers from the Faculties of Electrical Engineering, Civil Engineering and Aerospace Engineering participate in the programme.

The systems and control domain studies dynamic systems and the optimisation of their performance through modelling, sensor and actuator selection, data analysis and control design. The objectives of the programme are, therefore, to educate students to be able to scientifically analyse, model, simulate, design and implement methods and tools to control dynamic systems and to apply this knowledge and these insights in the fields of, among others, mechanical engineering, electrical engineering and applied physics. As the fundamental and generic systems and control theories and concepts may be applied to different application fields, the domain may be considered to be multidisciplinary.

The programme objectives have been derived from a recent report, commissioned by the International Federation of Automatic Control (IFAC) and drafted by the task force of a number of leading experts in this domain to describe the domain. The programmes of the three Universities recently conducted a benchmark study, comparing their programmes to other systems and control master programmes of universities in and outside of Europe. The results of this study show these programmes content-wise to be very much comparable to the Dutch programmes.

The Faculty has a Professional Field Board with representatives from the systems and control field. This Board meets twice per year and discusses the programme from the professional field perspective. In addition, the programme maintains contacts with industry through the graduation projects which are done in collaboration with non-academic organisations.

The programme objectives have been translated into the intended learning outcomes of the programme. These specify, among others, in-depth knowledge of and insights in the systems and control domain, knowing how to design controllers for complex dynamic systems, scientific research knowledge and skills, academic skills, collaboration and communication skills, also in multidisciplinary contexts, and ethical and societal awareness.

Programme management showed the intended learning outcomes of the programme to be in line with the Meijers' Criteria, demonstrating these to meet the master level.

Considerations

The panel is positive about the cooperation of the Master Systems and Control programmes of the three Dutch Universities of Technology, since this cooperation may be beneficial for the contents of all three programmes.

The Delft University of Technology programme is regarded by the panel to be adequately organised and managed. The panel notes with approval lecturers of other Faculties than the Faculty of Mechanical Maritime and Materials Engineering contribute to the programme, this reinforcing the multidisciplinary character of the programme.

The panel welcomes the programme objectives, as these give a very appropriate description of the systems and control domain and very adequately delineate the objectives regarding the knowledge and skills of students at completion of the programme. The panel notes the Delft programme to be mainly directed towards fundamental research in systems and control rather than its applications.

The panel is pleased to note the programme objectives meet international standards, as exemplified by the correspondence of the objectives with the International Federation of Automatic Control (IFAC) report. The panel welcomes the benchmark study conducted by the three Dutch Master Systems and Control programmes and observes these programme to be aligned with well-respected programmes in this domain abroad.

In the panel's view, the programme remains abreast of trends and developments in the professional field through regular meetings with the Professional Field Board and through cooperation with organisations in the field.

The panel regards the intended learning outcomes of the programme elaborate and well-phrased, being adequate operationalisations of the programme objectives and meeting the master programme level. The panel suggests to broaden the intended learning outcomes with aspects of signal processing, communication and computation.

Assessment of this standard

These considerations have led the assessment panel to assess standard 1, Intended learning outcomes, to be good.

4.2 Standard 2: Teaching-learning environment

The curriculum, the teaching-learning environment and the quality of the teaching staff enable the incoming students to achieve the intended learning outcomes.

Findings

The number of incoming students increased in the last years from 57 students in 2013 to 102 students in 2016. Of the incoming students, about 30 % to 40 % are from abroad. Due to the increase in the influx of both Dutch and European students, the inflow of non-European students has been limited to 20 students maximum.

The curriculum of the programme has a study load of 120 EC and takes two years to complete. Programme management presented a table to show the curriculum to meet the intended learning outcomes. The curriculum consists of eight obligatory core courses (36 EC), which are scheduled in the first year. These core courses cover core knowledge and skills on, among others, identification, control and systems. Five courses address fundamental knowledge. Two courses include project work and allow students to learn how to apply theoretical concepts in practice. One course introduces students to the history and current state of science and design. Also in the first year, students take 24 EC of electives, 18 EC of electives being selected from a predetermined list and 6 EC of free electives. The electives have to be approved by the master coordinator and the Board of Examiners. They are selected in consultation with the prospective graduation project supervisor. In the second year, students conduct the literature survey (15 EC) and do the graduation project (45 EC). The objective of these two curriculum components is for students to do research and to design methods to solve complex systems and control problems. Students may do an internship of 6 EC, but this is not compulsory. Students may do a double degree programme. These students take two times 60 EC of non-overlapping courses and 60 EC in a joint graduation project, and achieve two degrees. About 10 % to 20 % of all students in the programme pursue these trajectories.

There are a total of 16 lecturers in the department. All of them have a PhD. They are experienced researchers. The external research audits show very good to excellent results and many of the lecturers have received prestigious personal grants. The Master Systems and Control programmes of the three Universities of Technology work on research together in the Dutch Institute of Systems and Control (DISC). The lecturers of this programme refer to their research in the lectures. About 63 % of the lecturers are BKO-certified. Every year, the Faculty schedules the Education Day, during which lecturers are informed about education subjects. Students expressed to very much appreciate the lecturers' teaching capabilities and the supervisors' guidance of the graduation projects. With the increasing number of students, the lecturers are facing very demanding workloads. Six new staff members were recruited recently.

Students with bachelor degrees in Mechanical Engineering, Electrical Engineering, Applied Mathematics, Applied Physics, Aerospace Engineering or Molecular Science and Technology of one of the three Dutch Universities of Technology are admitted to the programme unconditionally. Most students tend to come from Mechanical Engineering. Students coming from abroad are admitted on an individual basis, taking their prior education and their English proficiency into account. The master coordinator checks these applications. Dutch candidates with bachelor degrees other than the ones mentioned are admitted after having completed a pre-master programme of a maximum of 30 EC. Students with bachelor degrees in this domain from higher vocational institutes have to complete a pre-master programme of a maximum of 30 EC as well.

All other students are denied enrolment. Students entering the programme, are registered at the other two Universities of Technology Master Systems and Control programmes as well. Prior to the beginning of the programme, programme management schedules information meetings for prospective students, informing them about the requirements and contents of the programme.

The study methods adopted in the programme include lectures, homework assignments, practical training sessions, hands-on projects to work on actual problems, guided self-study to do exercises and submit their work, and unsupervised self-study. Students may take courses at the Master Systems and Control programmes of the other Universities of Technology.

In an introductory week at the beginning of the programme, students are introduced to the programme and to the research done by lecturers. At the end of the first quarter during the so-called master market, staff members present their research. Students list their preferences for research themes. On the basis of these preferences, programme management assigns supervisors to the students, one individual supervisor per student. These supervisors guide students in the selection of the elective courses in order to prepare them for their graduation project. Students experience the programme to be very challenging.

Considerations

The panel is very appreciative of the curriculum. The contents of the courses are relevant and the level of the courses is distinctly very high. The panel considers the curriculum coherence to be up to standard, being composed of core courses, elective courses, and the graduation project. The panel considers the core programme to be very appropriate to introduce students to the fundamentals of the domain. Domain-independent modelling may be strengthened. Although multidisciplinary elements may be discussed in courses, students being taught the multidisciplinary dimensions of the systems and control domain is not enforced. Students may remain within their own discipline. The panel recommends to ensure all students being introduced to the multidisciplinary dimensions of the systems and control domain. In addition, the panel suggests to reinforce the academic skills in terms of presentation and writing skills, especially by feedback on the technical writing. The panel also proposes to give more weight in the curriculum to elements of social and ethical awareness. As students now have only very limited chances to spend part of the curriculum abroad, the panel advises to schedule opportunities for students to do so.

The panel regards the lecturers to be very good researchers in this domain with excellent research track records. The lecturers refer to their research in the classes. The panel welcomes the cooperation of the Master Systems and Control programmes in the DISC Research School. The panel considers the lecturers to be good teachers, as the proportion of lecturers being BKO-certified shows. The panel notes students to be very positive about the lecturers. The panel suggests to monitor the lecturers' workload and supports programme management intentions to recruit new staff.

The admission requirements and the admission procedures are very much up to standard, being very strict and admitting students who may be considered to have a fair chance of completing the programme. The panel is positive about the pre-master programme, enabling students to gain access to the programme. The panel welcomes the programme requiring students to remedy deficiencies prior to enrolment and not as part of the curriculum.

The panel appreciates the study methods adopted in the programme. The panel also is positive about the study guidance by the supervisors. The panel is satisfied about the balance of face-to-face education and self-study in the programme. The panel recommends to monitor the study load, as this may at some points be too demanding.

The panel is positive about the material facilities and the laboratories, provided to the students of the programme.

Assessment of this standard

These considerations have led the assessment panel to assess standard 2, Teaching-learning environment, to be good.

4.3 Standard 3: Student assessment

The programme has an adequate system of student assessment in place.

Findings

The programme examination and assessment rules and regulations are in accordance with the Faculty of Mechanical, Maritime and Materials Engineering Assessment Policy. The Board of Examiners for this and most other programmes of the Faculty has the responsibilities to monitor the examinations and assessments quality.

The examination methods adopted in the programme are written examinations, lab reports, homework exercises, group assignments, individual assignments and oral examinations. The examination methods are selected in line with the course contents and course goals. In most courses, multiple examinations are scheduled, allowing to test students' performances in more than one way. In case of group assignments, individual parts of these assignments may be assessed or questions may be directed to individual students. Differentiated grades may be given. In addition, students review each others' performances in the group.

Graduation projects are done in collaboration with partners from industry. The problem statements of these projects are checked for the scientific research contents. Projects are only approved, if these industrial partners are perceived to be trustworthy and the company supervisors are known to the programme. Students are entitled to individual supervisors. Supervisors are staff members, experts in the field of the project. The graduation projects consist of two parts, the literature survey and the project itself. The literature survey is reported on in writing and presented at a colloquium. The supervisor assesses this literature survey. The graduation projects are assessed by the Graduation Committee, consisting of at least three faculty members, being chaired by a full or associate professor and having one member coming from another research group or preferably another department. The Graduation Committee assesses the written report and the oral defence, using rubrics with a number of relevant assessment criteria. Students get oral feedback on the project.

Programme management introduced measures to ensure the quality of the examinations. Examiners should have or should be in the process of obtaining their BKO-certificate. Examiners are appointed by the Board of Examiners. The course examinations are drafted to correspond to the course learning goals. This is called the process of constructive alignment. Examiners are to present the examinations to their colleagues for peer review. They are also required to submit the test matrices, to demonstrate meeting the constructive alignment principles. Answer models are mandatory as well. The assessment of examinations may be done by examiners jointly, discussing the assessments. The educational advisor of the Faculty provides feedback on the examinations. This process was only recently introduced. Every year, the Board of Examiners reviews a sample of graduation projects. Students are presented model examinations and are given the right to get feedback on their examinations. Fraud and plagiarism regulations are in place. Fraud and complaints committees inspect cases of fraud and plagiarism and advise the Board of Examiners on the handling of these cases.

Considerations

The panel considers the examinations and assessments rules and regulations of the programme to be very much up to standard, complying with Faculty policy statements and frameworks. In addition, the panel approves of the position and the responsibilities of the Board of Examiners.

The panel regards the examination methods to be adequate, having seen these to meet the course goals and course contents. The panel is positive about the multiple examinations scheduled in most courses. In addition, the panel regards the assessment of group examinations to be adequate.

The programme ensures the research orientation of industry-related graduation projects. The supervision of the projects is done very appropriately, as students confirmed. The panel especially welcomes the conscientious assessment of the graduation projects by the broadly composed Graduation Committees. This ensures reliable assessments of these projects. The rubric for the assessments includes relevant assessment criteria.

The panel is impressed by the wide-ranging measures taken by programme management to promote and ensure the validity of the examinations, the reliability of the assessments and the transparency of the examinations.

Assessment of this standard

The considerations have led the assessment panel to assess standard 3, Student assessment, to be good.

4.4 Standard 4: Achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.

Findings

The panel reviewed the examinations of a number of courses in the programme.

The panel studied fifteen graduation projects of graduates of the programme of the last few years. On the basis of the grades in this selection, the average grade of these projects may be calculated to be about 7.8.

In the National Alumni Survey 2017, graduates of the programme expressed being very content about their preparation for the labour market. Practically all graduates found suitable positions within three months after graduation.

Programme graduates may proceed to the Dutch Institute of Systems and Control (DISC) to continue their studies as PhD students. More than 30 % of the programme graduates continue as PhD students at this institute or at other institutes.

Programme management recently conducted a survey among employers of programme graduates. These employers expressed experiencing the graduates of this programme to be well educated, definitely meeting the employers' expectations and being knowledgeable about and skilful in the systems and control domain.

Considerations

The examinations of the courses, the panel studied, are up to standard.

The grades given to the graduation projects by the programme examiners are fully endorsed by the panel. The projects reviewed by the panel exhibited good quality with respect to the subjects investigated and in terms of the results achieved. In addition, the graduation projects were especially good methodologically.

The panel considers the graduates of the programme to be very knowledgeable about and very skilled in this domain and to be very well prepared for the labour market. The career prospects of the graduates are very good, if not excellent. The panel noted the graduates to be able to apply their knowledge and skills both in positions in the professional field or as PhD students.

Assessment of this standard

The considerations have led the assessment panel to assess standard 4, Achieved learning outcomes, to be good.

5. Overview of assessments

Standard	Assessment
Standard 1. Intended learning outcomes	Good
Standard 2: Teaching-learning environment	Good
Standard 3: Student assessment	Good
Standard 4: Achieved learning outcomes	Good
Programme	Good

6. Recommendations

In this report, a number of recommendations by the panel have been listed. For the sake of clarity, these have been brought together below. These panel recommendations are the following.

- To broaden the intended learning outcomes with aspects of signal processing, communication and computation.
- To ensure all students being introduced to the multidisciplinary dimensions of the systems and control domain.
- To consider strengthening the domain-independent modelling in the core courses.
- To reinforce the academic skills in terms of presentation and writing skills in the curriculum.
- To give more weight in the curriculum to elements of social and ethical awareness.
- To schedule opportunities for students to spend part of the curriculum abroad.
- To monitor the lecturers' workload.
- To pay attention to the study load of the programme.