Assessment report

Ingénieur Civil des Mines (ICM)
Master's Degree in Science and
Executive Engineering
Ecole Nationale Supérieure des Mines de
Saint-Etienne, France



Certificate for Quality in Internationalisation



european consortium for accreditation

Assessment report

- Ingénieur Civil des Mines (ICM) Master's Degree in Science and Executive Engineering

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Glossary

BDE Bureau des Elèves (School's Students' Union Association)

CEFRL Common European Framework of Reference for Languages

CTI Commission des Titres d'Ingénieur (French accreditation organisation for

engineering degrees)

ECTS European Credit Transfer System

ICM Ingénieur Civil des Mines diploma: Master's Degree in Science and

Executive Engineering

ILOs Intended Learning Outcomes

IMT Institut Mines Télécom (the Mines-Telecom Institute group of French

Grandes Ecoles to which Mines Saint-Etienne belongs:

https://www.imt.fr/en/

L3 Bachelor's year

M1/M2 Master's years one and two

ME Maison des Elèves (School's own student hall of residence)

MIS Mines International Students' Association

MSc Master of Science diploma

MSE Mines Saint-Etienne: http://www.mines-stetienne.fr/

PDCA Plan, Do, Check, Act

PIRB Programmes' International Review Board

SP21 2017-21 Strategic Plan



1. Executive summary

The ICM Master's Degree in Science and Executive Engineering was assessed by Commission des Titres d'Ingénieur (CTI). CTI convened an assessment panel which studied the self-evaluation report and undertook a site visit on the 3rd and 4th July 2018.

The aim of the three-year Ingénieur Civil des Mines (ICM) Master's degree in Science and Executive Engineering at Ecole Nationale Supérieure des Mines de Saint-Etienne is to train engineers for top-level management and technical positions in industrial and service companies in a globalised context; Global executive engineers for global industry and services (see Annex 12, "2014 CTI Accreditation renewal – ICM objectives p.22").

Upon graduation, the ICM Executive Engineer plays a similar role to that of an orchestral conductor, able to manage highly specialised and diverse teams from a wide variety of cultural and professional backgrounds. As a result, the ICM engineering programme enables students to experience multiple international and intercultural activities, both at home and abroad, in academic and company contexts in several different countries and cultures.

Standard 1 - Intended internationalisation: Good

The internationalisation goals for the programme are satisfactorily documented. These are shared and supported by stakeholders within and outside the programme. The recently created International Advisory Board should become the group of reference to ensure the sustainability of MSE's international strategy implementation.

In addition, verifiable objectives have been formulated:

Objective 1: All students successfully have to carry out an academic period of study and a company internship abroad during the course. All students must reach an advanced level of English (minimum C1 level) and become professionally operational in a second foreign language (minimum B2 level).

Objective 2: A significant increase in international incoming mobility should be achieved in order to intensify intercultural enrichment and international practices both in the ICM engineering programme and on the campus as a whole.

Increasing the number of foreign students at MSE remains an important objective in the latest

SP21, along with an increase in the number of foreign professors. At the institutional level, the School's board meets annually to set both quantitative (numbers of student intake) and qualitative objectives (international and academic origins) for the coming academic years for degree-seeking students.

Furthermore, the internationalisation measures taken by the programme managers relate to teaching and learning, contributing to their quality.

Overall assessment of Standard 1

The panel highly appreciates the efforts carried out by the ICM programme managers in order to improve the quality of teaching and learning through the implementation of a coherent internationalisation strategy. However, the programme could highly benefit from a benchmarking process in order to compare the main indicators' performance with similar programmes' good practices developed by HE institutions abroad. The panel therefore assesses *Standard 1. Intended internationalisation* as good.

Standard 2 – International and intercultural learning: Satisfactory

The panel considers that the international and intercultural learning outcomes are fully integrated into the overall learning outcomes of the programme, all along the 3 years. These outcomes are in phase with the programme's internationalisation goals. Students' assessment methods allow to verify the students' progress and monitor the achievement of the previously fixed learning outcomes.

Statistics for the last seven years show that between 10% and 28% of graduates find their first job in a foreign country, and about 40% work in an international context.

However, the panel considers that MSE should find a positive differentiation with other IMT schools in order to have more direct contacts with universities and companies abroad, as well as improve contacts with international alumni in order to better understand international markets and job opportunities.

Overall assessment of Standard 2

The panel found that MSE is strong-willed for internationalisation. "<u>To be</u> international rather than <u>to do</u> international" is the main ambition of the executive committee for MSE. This is not a new concept for the institution, but formal procedures have been constructed only recently.



The panel deems most of the underlying criteria of this standard to be met. The panel recommends finishing the ongoing development. The panel therefore assesses *Standard 2. International and intercultural learning* as satisfactory.

Standard 3 - Teaching and learning: Good

In order to meet the programme's objectives, the curriculum includes such features as one "openness" module per semester (six semesters in total), foreign language courses in at least two foreign languages and a third optional (French foreign language for non-French natives), and compulsory international mobility (and recommended double mobility for an academic semester and internship). These measures highly contribute to develop intercultural awareness. Nevertheless, international learning outcomes could be further clarified and stressed in the curriculum.

During the site visit, the panel found sufficient evidence to deem the teaching methods suitable and diverse for achieving the intended international and intercultural learning outcomes. But doubtless, the most distinctive feature of the ICM programme offered at MSE is the learning environment, which can only be qualified as outstanding.

Overall assessment of Standard 3

The panel deems all the underlying criteria of this standard to be met. In particular, the learning environment can be regarded as an international example. The panel therefore assesses *Standard 3: Teaching and Learning* as good.

Standard 4 - Staff: Good

In 2016, there were 30 different nationalities represented at MSE amongst the 392 members of staff. The requirement of new recruits to be able to teach in English assures a base-level of competence in English among the faculty, but the most important support to staff internationalisation is the fact of setting international experience as a criterion for advancement, which shows a strong acknowledgement of and respect for the importance of internationalisation and interculturalism at MSE.

It was clear from the documentation and the interview sessions with academic staff that they work and think in an international mindset, and that the flux of international staff mobilities, in and out of MSE, is an accepted and welcome feature for the faculty members. Furthermore,

the panel considers that the services provided to the staff are consistent with the staff

composition and adequately facilitate international experiences, intercultural competences

and language skills.

Capitalising on the opportunities offered by the IMT network should indeed facilitate staff

international mobility, as well as encouraging sabbatical periods abroad by organising a

formal system to cover teaching staff absences.

Overall assessment of Standard 4

The panel found that the constitution of the Programmes International Review Board and the

planned International Advisory Board is an acknowledgement of the priority MSE assigns to

internationalisation. The panel deems all the underlying criteria of this standard to be met.

The panel therefore assesses Standard 4: Staff as good

Standard 5 - Students: Good

MSE is strongly oriented towards the diversity of the student group and does enjoy numerous

and long-standing international partnerships. Consequently, the number of international

incoming students (2014-2017) has been increasing in the past three years, as well as the

proportion of degree-seeking students.

At the same time, the school tries and maintains the rate of international outgoing student

Also benefiting from the whole IMT network, the school is mainly oriented towards its student

mobility and cultural diversity rather than social mix.

The composition of the student group is in line with the programme's internationalisation

goals. The last update of the teaching program and the recent monitoring of the figures can

explain the trends, which can be interpreted as reassuring.

The panel found the MSE's commitment convincing and concludes that the curricular and

extra-curricular services provided to all students are suitable for their personal fulfilment in

their international experience.

Overall assessment of Standard 5



MSE is clearly dedicated to its students. Thus, most of the underlying criteria of this standard are successfully met. **The provided services and the strong commitments can be regarded as an example.** The panel therefore assesses *Standard 5: Students* as good.

Overall judgement

Based on ECA's assessment rules, the panel nominates the ICM Master's Degree in Science and Executive Engineering of Mines Sain-Etienne for the Certificate for Quality in Programme Internationalisation.

The panel would like to point out the outstanding quality of the programme as far as two indicators are concerned: the Learning environment in Standard 3 and the Services provided to students in Standard 5, which should be both considered as international good practices.

The assessment procedure

The assessment procedure was organised as laid down in the Frameworks for the Assessment of Quality in Internationalisation (Frameworks) published by the European Consortium for Accreditation (ECA).

A panel of experts was convened and consisted of the following members:

- Dr Eugenia Llamas PhD, panel chair, Director of International Relations at Ecole des Ingénieurs de la Ville de Paris, EIVP (France)
- Ms Isabelle Avenas-Payan, CTI member, Vice-President of "Ingénieurs et Scientifiques de France" (France)
- Prof Barry O'Connor, President of Cork Institute of Technology (Ireland)
- Prof José Turmo, Department of Civil and Environmental Engineering, ETSECCPB, Universitat Politécnica de Catalunya (Spain)
- Mr Pavel Martin, student expert, MSc in Mechanical Engineering at ENSAM and Karlsruhe Institute of Technology (Germany)

The composition of the panel reflects the expertise deemed necessary by the Frameworks. The individual panel members' expertise and experience can be found in <u>Annex 1:</u> <u>Composition of the assessment panel</u>. All panel members signed a statement of independence and confidentiality. These signed statements are available from CTI upon simple request. The procedure was coordinated by Ms Marie-Jo Goedert, Administrative and International Director at CTI.

The assessment panel studied the self-evaluation report and annexed documentation provided by the programme before the site visit. (*Annex 2: Documents reviewed*) The panel organised a preparatory meeting on the 3rd July. The site visit took place on the 3rd and 4th July at *Ecole des Mines Saint-Etienne* (*Annex 3: Site visit programme*)

The panel formulated its preliminary assessments per standards immediately after the site visit. These were based on the findings of the site visit which built upon the review of the self-evaluation report and annexed documentation.



The panel finalised the draft report on the 24th July It was then sent to the programme managers at *Mines Saint-Etienne* to review the report for factual accuracy. Some minor (formal) issues were reported and the panel amended the report where necessary.

The final version of the report was approved on the 4th September 2018.

2. Basic information

Qualification:

| Master's Degree in Science a | nd Executive Engineering |
|------------------------------|--|
| Number of credits: | 180 ECTS |
| Specialisations (if any): | Mechanical Engineering and Material Science Process and Energy Engineering Microelectronics Information Technology Data Science Production and Logistics Management Biomedical Engineering Environmental Engineering Corporate Finance |
| ISCED field(s) of study: | 041 Business and Administration 052 Environment 054 Mathematics and Statistics 061 Information and Communication Technologies 071 Engineering and Engineering Trades |
| Institution: | Ecole Nationale Supérieure des Mines de Saint-Etienne – "Mines Saint-Etienne" |
| Type of institution: | Graduate School of Engineering and Research |
| Status: | Accredited to award the Master's Degree in Engineering to each of its academic and professional engineering programmes |
| QA / accreditation agency: | СТІ |
| Status period: | From September 2015 to September 2021 |



3. Assessment scale

The assessment-scale relates to the conclusions of the assessment panel at the level of the standards and is based on the definitions given below. Through the underlying criteria, each of the standards describes the level of quality or attainment required for a satisfactory assessment. The starting point of the assessment scale is however not threshold quality but generic quality. Generic quality is defined as *the quality that can reasonably be expected from an international perspective*.

| Unsatisfactory | The programme does not meet the current generic quality for this standard. The programme does not attain an acceptable level across the standard's entire spectrum. One or more of the underlying criteria shows a meaningful shortcoming. |
|----------------|--|
| Satisfactory | The programme meets the current generic quality for this standard. The programme shows an acceptable level of attainment across the |
| | standard's entire spectrum. If any of the underlying criteria show a shortcoming, that shortcoming is not meaningful. |
| Good | The programme surpasses the current generic quality for this standard. |
| | The programme clearly goes beyond the acceptable level of attainment across the standard's entire spectrum. None of the underlying criteria have any shortcomings. |
| Excellent | The programme systematically and substantially surpasses the current generic quality for this standard. |
| | The programme excels across the standard's entire spectrum. This extraordinary level of attainment is explicitly demonstrated through exemplary or good practices in all the underlying criteria. The programme can be regarded as an international example for this standard. |

4. Assessment criteria

Standard 1: Intended internationalisation

Criterion 1a: Supported goals

The internationalisation goals for the programme are documented and these are shared and supported by stakeholders within and outside the programme.

"Mines Saint-Etienne: Building together!" is the catchphrase representing the latest MSE strategic plan covering a four-year span that will be achieved in 2021 (SP21). 360 internal and external stakeholders, together with 120 alumni and practitioners in the field worked together in order to propose a document intended to provide the guidelines for MSE to become an "internationally recognised Technological University".

At a programme level, ICM boasts a clear policy in internationalisation of the curricula: after making mobility mandatory for all graduates (as well as the study of a second foreign language) the aim is now to instil an international culture state of mind in all activities whenever possible, by shifting the focus from "doing international" to "being international". To achieve that goal, graduates are prepared —and that from the moment they enrol- to develop international and intercultural skills at home and abroad; the emphasis is put on creating and sustaining "completeness" in international partnerships, implying a balance in student mobility (both incoming and outgoing), the waiving of tuition fees and encouraging research collaboration. The complete lists of partnerships is available in Annex 14.

An International Advisory Board has recently been created. It is composed by twelve high-level international professionals from academia and industry and is due to sit for the first time in autumn 2018.

Conclusion and recommendations

The panel concludes that the internationalisation goals for the programme are satisfactorily documented. The goals are shared and supported by stakeholders within and outside the programme. The panel recommends that the IAB should be the committee of reference for a thorough follow-up of the internationalisation strategy implementation, in order to ensure its sustainability.

Criterion 1b: Verifiable objectives

Verifiable objectives have been formulated that allow monitoring the achievement of the programme's internationalisation goals.

The Programme's International Review Board (PIRB) has been set up in 2017 to define each programme's international and intercultural objectives for the year to come as well as to monitor the level of achievement of the objectives already fixed. This PIRB is composed by members of *Comité de Pilotage des Relations Internationales*. Its proposals are presented to the Executive Board for approval.



As part of a general internationalisation strategy, two objectives have been fixed by the PIRB commencing in the coming academic year, with a deadline of total implementation agreed for 2021/22:

- Objective 1: All students successfully carry out an academic period of study and a company internship abroad during the course. All students reach an advanced level of English (minimum C1 level) and become professionally operational in a second foreign language (minimum B2 level).
- Objective 2: Significantly increase international incoming mobility in order to intensify intercultural enrichment and international practices both in the ICM engineering programme and on the campus as a whole.

These objectives are explicit in the self-evaluation report and can be found in Annex 1, "PIRB ICM Minutes – 29Nov2017".

Four key international performance indicators, objectives and monitoring statistics have been set for the 2017-19 period, both for incoming and outgoing international student-mobility and foreign language proficiency.

Increasing the number of foreign students at MSE is also a clear objective set out in the Institut Mines-Télécom (IMT) 2013-17 Contrat d'Objectifs et de Performance (COP), (information to be found in Annex 15, "Abridged IMT COP 2013-17" for MSE objectives, P3: objective +15% foreign students). This objective was reached and surpassed with +68% foreign Master's and MSc students registered in September 2017 compared to September 2013, and remains an important objective in the latest SP21, along with an increase in the number of foreign professors. At the institutional level, the School's board meets annually to set quantitative objectives (numbers of student intake) and qualitative objectives (international and academic origins) for the coming academic years for degree-seeking students (Annex 16, "Voted ICM degree-seeking student recruitment places 2017-18" for details).

Conclusion and recommendations

The panel concludes that objectives have been formulated and that these objectives are verifiable. They allow monitoring the achievement of the programme's internationalisation goals. The panel recommends that the programme managers continue with their efforts to focus on qualitative indicators adapted to the size of the institution proposing the programme.

Criterion 1c: Impact on education

The internationalisation goals explicitly include measures that contribute to the overall quality of teaching and learning.

Students are strongly encouraged to complete their first international mobility in year M1, either in the first semester of their second year at MSE (year M1), or during their mandatory internship at the end of M1 year, or both. Information on the evolution of outgoing student percentages in year M1 since 2014 can be found on page 15 of the self-evaluation report, showing a steady yearly growth from 49% to 70%.

During the site visit, the panel had the opportunity to discuss both with students and teaching/administrative staff the suitability of this policy in order to accelerate students'

international awareness and personal growth. This particular organisation is deemed by MSE a "PDCA (Plan, Do, Check, Act) continuous improvement cycle" composed by alternate sequences of time spent at the home institution and abroad.

22 double-degree agreements in 14 countries increase the opportunities for outgoing students to follow a truly internationalised curriculum. Incoming students are often recruited through these agreements, thus ensuring both the quality and adequacy of incoming students' profiles.

Internationalisation at home measures also provide students with the opportunity to continue developing their intercultural skills. Such measures are documented on pages 16 to 18 of the self-evaluation report, as well in Annex 27 (particularly those concerning the "buddy system" and the integration activities organised by the students' associations). The meeting with both French and international students allowed the panel to witness the benefits of such policies.

The inclusion in the ICM curriculum of a module to develop intercultural skills in year M1 further provides valuable learning outcomes for student's future intercultural and international experiences.

The size of MSE is also a great advantage so as to permit a real mix of national and international students, where everybody knows each other. As put by the programme's managers: "(...) this creates a context where numerous activities and events often involve staff and students irrespective of their positions or origins, thus reducing social barriers and increasing the international at home experience for all'.

Conclusion and recommendations

The panel concludes that the internationalisation goals relate to teaching and learning. The measures included contribute to their quality. The panel highly appreciates the efforts carried out by the ICM programme managers in that sense, but also recommends a benchmarking process to be implemented in order to benefit from the good practices developed by HE institutions abroad.

Overall conclusion regarding Standard 1. Intended internationalisation

The panel found that the intended internationalisation strategy and implementation policies are shared by stakeholders and conveniently monitored. The panel deems all the underlying criteria of this standard to be met. The panel therefore assesses *Standard 1. Intended internationalisation* as good.

Standard 2: International and intercultural learning

Criterion 2a: Intended learning outcomes

The intended international and intercultural learning outcomes defined by the programme are a clear reflection of its internationalisation goals.

"To be international rather than to do international" is the main ambition of the executive committee for MSE. In the self-evaluation report, the panel could read that MSE goal is "to prepare students to be able to operate successfully as executive engineers in top-level management and technical positions in industrial and service companies in a globalised context". In order to reach this goal, 28 intended learning outcomes have been defined and are listed in Annex 2 (ICM programme ILO general reference framework). Some are directly linked to international or cultural learning (6) and some are indirectly linked (11).



The panel considers that the international and intercultural learning outcomes are fully integrated into the overall learning outcomes of the programme, all along the 3 years.

The complete course syllabus (in Annex 4) details the intended learning outcomes for each pedagogical unit as well as the teaching language.

The panel found some pedagogical units that are said to be directly linked to international learning outcomes without clear detail. The school agreed that there are some errors in the syllabus details of some pedagogical units.

Conclusion and recommendations

The panel concludes that the intended international and intercultural learning outcomes correspond with the programme's internationalisation goals. The panel recommends updating the syllabus details in order to sort out any errors.

Criterion 2b: Student assessment

The methods used for the assessment of students are suitable for measuring the achievement of the intended international and intercultural learning outcomes.

There is a large variety of assessment methods used. They are described in the complete course syllabus (annex 4) along with corresponding ECTS credits:

- Individual assessment: written exam, individual oral exam, individual presentation, individual practice exercise, individual report
- Group assessment: project submission, group presentation, group practical exercise, group report; as much as possible, groups are multicultural
- Other specific assessment such as participation in a course of liberal arts (annex 4 page 246) or sustainability test in a course of sustainable development and corporate social responsibility (Annex 4 page 251)

Each student is tutored all along her/his studies for a regular self-evaluation. The process ends with a professionalization oral exam before graduation (details in Annex 32). A booklet "Student Professionalization Guide" gives all the details in Annex 18.

A minimum of three months of study or internship outside France is required. Each student who is experiencing an international stay, either through an academic exchange or an internship, must write a report that includes advice for everyday life. These reports are available to anyone who wish to prepare for an international experience. The reports that the panel had access to were all written in French.

Each student is required to study at least two foreign languages, one of which being English, and another different from French.

Incoming international students are expected to arrive at MSE with a minimum B1 level of French. If necessary, they enrol in intensive French language and culture lessons prior to MSE classes. They have to validate a B2 level in French for graduation.

Conclusion and recommendations

The panel concludes that methods used for the assessment of students are suitable and complete for measuring the achievement of the intended international and intercultural learning outcomes. Students have many ways of developing international experience. The panel recommends more student reports are written in a foreign language.

Criterion 2c: Graduate achievement

The achievement of the intended international and intercultural learning outcomes by the programme's graduates can be demonstrated.

The Programmes' International Review Board first met in November 2017 and defined Key International Performance Indicators (KIPI) that are described in Annex 1:

- Students spend an average of five to six months abroad by the time they graduate. During the last 3 years, about 30% of graduates experience both an international internship and an international academic mobility; the goal is to reach 40% in 2020
- During the last 4 years, more than 50% of graduates certify a C1 minimum level of proficiency in English, except in 2017; the goal is to reach 60% in 2020 and 90% in 2022
- During the last 4 years, more than 40% of graduates certify a B2 level of proficiency in another foreign language; the goal is to reach 60% in 2020
- An international student recruitment campaign is planned from spring 2018

MSE is connected to many universities or companies all over the world (list in annex 8), either directly or through IMT. This gives a large choice to students for international mobility.

The overall environment is also encouraging international exchanges at home:

- Most students live in the same student accommodation premises and share activities (sports, cultural events)
- Staff are also experiencing mobility so that they can better guide the students
- In academic year 2016-2017, 29% of final-year students who stayed in Saint-Etienne also obtained an international MSc degree at home

During the visit, the panel had a very good feedback from Bristol University. Alumni who were interviewed by the panel agreed on MSE students being adaptive, open minded, and with a strong mathematical background. Several international groups of MSE graduates are active, often associated with other IMT school graduates. However the need for MSE engineers does not seem obvious.

The panel spoke with the Executive Director of ICM Alumni Association and visited the office of the association which is located inside the school. Alumni are close to the students (tutoring, conferences, projects, integration week-end). They work with MSE (committees, graduation jury). A foundation gives two to three scholarships per year.

Statistics for the last seven years (in Annex 19) show that between 10% and 28% of graduates find their first job in a foreign country, and about 40% work in an international context.

Conclusion and recommendations

The panel concludes that the graduates substantially achieve the intended international and intercultural learning outcomes. The panel recommends:

- To pursue the efforts in increasing the number of international incoming students in order to boost international programmes at home
- To find a positive differentiation with other IMT schools in order to have more direct contacts with universities and companies abroad
- To improve contacts with international alumni in order to better understand international markets and job opportunities



Overall conclusion regarding Standard 2. International and intercultural learning

The panel found that MSE is strong-willed for internationalisation. It is not a new concept for MSE, but formal procedures have been constructed only recently. The panel deems most of the underlying criteria of this standard to be met. The panel recommends finishing the ongoing development and following the above recommendations.

The panel therefore assesses Standard 2. International and intercultural learning as satisfactory.

Standard 3: Teaching and Learning

Criterion 3a: Curriculum

The content and structure of the curriculum provide the necessary means for achieving the intended international and intercultural learning outcomes.

The curriculum is briefly introduced in pages 24-27 of the self-evaluation report and in Annex 3 ("ICM Course structure 2017-18"). More detailed information about each module and its learning outcomes can be found in the course syllabus in Annex 4 (ICM Syllabus 2017-18).

The aim of the ICM Master's degree in Science and Executive Engineering is to train engineers to perform top-level management and technical positions in industrial and service companies in a globalised context by coupling top level academics with professionalization. To meet the programme's objectives, students begin in their first year (Bachelor's year) by studying a broad core curriculum of subjects in science, engineering, humanities, economics and management. In the two following years, students are then able to specialise in two Majors (from a choice of ten) that correspond to the MSE areas of research and expertise, and also a Societal Challenge module (from a choice of eight) that aims to put the knowledge gained from the scientific Majors into the context of one of society's current key challenges.

In order to achieve this, the curriculum includes a) One "openness" module per semester (six semesters in total) b) Foreign language courses in at least two foreign languages and a third optional (French foreign language for non-French natives) c) A group-project each semester, d) Compulsory international mobility (and recommended double mobility for an academic semester and internship)

Openness modules allows to develop intercultural (both on national and societal level) awareness. The methodology of language teaching (through literature, history, cuisine) allows students to be permeated with international culture (literature, laws, habits...). International mobility allows to gain a wide range of intercultural skills.

Group teaching, though very important for acquiring international skills, cannot be presented as part of the curriculum, but as a methodology.

From the perusal of the syllabus, it can be concluded that learning outcomes as: Operational knowledge of at least two foreign languages; Capacity to organise and supervise exchanges with sector specialists, of different cultures and nationalities; Capacity to work and communicate in a multi-cultural team, to be attentive and a good listener with relational aptitudes; aptitude to operate in an intercultural context (international social diversity); aptitude to fit into a new environment, especially an international one; to be able to adapt behaviour to the context, to anticipate and manage change and unforeseen events; adaptability, resourcefulness are achieved at the end of the studies.

Subjects as Foreign languages (including English), International Finance, International Communication, Geopolitics, International Strategy... explicitly include these learning outcomes in their description (Annex 4).

Conclusion and recommendations

The panel concludes that the content and the structure of the curriculum provide the necessary means for achieving the intended international and intercultural learning outcomes. The panel recommends that these international learning outcomes can be further a) clarified and b) stressed in the curriculum.

- a) A matrix linking different subjects and international learning outcomes should be produced. Annex 5 produces a matrix but it is incomplete and not suitable for an efficient cross-checking.
- b) International/ intercultural learning outcomes should be specifically identified with the different subjects of the syllabus. For example, but not limited to, subjects as Company Management Techniques, Civic Project, Labour and Company Law, Environmental Assessment, Motivational Management, Corporate Social Responsibility, Global Performance, Social Audit, Sociologist's View of Change, Sustainable Human Resources Management, Risk Insurance, International Trade, Management and the Game of Go ("sic") or Industrial Property, should include explicit international learning outcomes in their syllabus. Some others, like for example, but not limited to, Operational Research, Hypotheses Testing, Game Theory, Business Game, Venture Capital Industry, Energy Economics, Econometrics, Innovation Management, Industrial Hazard or Probability and Statistics, may be used to introduce examples or problems or case studies from an international perspective. All French or foreign language courses should include some cultural learning outcome (as for example, "Developing inter-cultural skills and enriching his knowledge of civilisations" present in second foreign language and/or third foreign language). All technical subjects may include the learning of the scientific or technical terms in English, provided that they are not taught in English. Conversely, the technical terms in French should be a learning outcome of the English technical courses.

Criterion 3b: Teaching methods

The teaching methods are suitable for achieving the intended international and intercultural learning outcomes.

Teaching methods are presented in pages 27 to 29 of the self-evaluation report, and to some extent, in page 26. Teaching methods include project-based and problem-based learning, serious games, case studies, laboratory work, group, pair and individual work, flipped and reversed pedagogy.

Foreign language courses are in small groups (12 students per average with French and foreign students mixed together) and intensive tutorial sessions in pairs, which is considered very adequate to efficiently acquire language skills. Moreover, the methodology of language teaching allows students to be permeated with international culture. The fact that the department in charge of teaching languages is The Department of Foreign Languages and **Cultures** summarizes that the focus of the teaching is not only language.

Group projects, which gather from six to ten students, are also a very good teaching method to achieve learning outcomes. Even though students form groups according to their scientific or technical interests and not trying to include different origins, as a matter of fact, students are very mixed in such groups.



Teaching methods are deemed broad and diverse and they are deemed to be suitable.

Conclusion and recommendations

The panel concludes that the teaching methods are suitable and diverse for achieving the intended international and intercultural learning outcomes.

Criterion 3c: Learning environment

The learning environment is suitable for achieving the intended international and intercultural learning outcomes.

International learning environment and international environment in general is outstanding, as it is very international. The international atmosphere could also be perceived during the panel visit to the School. The learning environment is described in pages 30 to 32 of the self-evaluation report.

The percentage of international students is around 30% and there are specific programmes to integrate and mix them (e.g. Welco'Mines programme, new-student integration weekend). Web page fully available in English, with complete information for foreign students, relax corner with a world map with pictures and names of all the students abroad identifying their host country, a network of MSE staff with specific expertise in particular countries is available for advising outgoing students, very wide range of partners around the world to host MSE's students, Mines International Students' Association which is an important asset for student integration, dormitory able to host all MSE students that very conveniently mixes all nationalities in their lodgings.

Conclusion and recommendations

The panel concludes that the learning environment is outstanding for achieving the intended international and intercultural learning outcomes.

Overall conclusion regarding Standard 3: Teaching and Learning

The panel deems all the underlying criteria of this standard to be met. In particular, the learning environment can be regarded as an international example. The panel therefore assesses *Standard 3: Teaching and Learning* as good.

Standard 4: Staff

Criterion 4a: Composition

The composition of the staff (in quality and quantity) facilitates the achievement of the intended international and intercultural learning outcomes.

The staff composition has a good mix in terms of international and intercultural backgrounds. Thus, in 2016, there were 30 different nationalities represented amongst the 392 members of staff at MSE. Additionally, amongst the cohort of 147 PhD students there are 68 foreign students all of whom are required to take part in some aspects of teaching as part of their PhD course. This is a great resource and source of influence for both French and international students at MSE, and a great learning opportunity also for these overseas PhD candidates.

The composition and international make-up of the departments specifically dedicated to Internationalisation are well-blended to take on this task.

While the Department of Foreign Languages and Cultures (c.35 foreign language teachers who represent 17 different nationalities, teaching 7 foreign languages) is in itself predominantly staffed by non-permanent staff, with only 2.5 permanent staff members, they are strongly integrated with both Administration of Studies Department (comprising 25 members of staff of seven different nationalities who speak 8 different foreign languages) and International Department (8 members of seven different nationalities) in their delivery of support to students pursuing the international dimension of their studies at MSE. It is also clear, particularly evident during the meeting with the Panel at the site visit, that there is strong integration and co-working with academic faculty on matters international.

The requirement of new recruits to be able to teach in English assures a base-level of competence in English among the faculty. Setting international experience as a criterion for advancement is also a strong on-going acknowledgement of and respect for the importance of internationalisation and interculturalism at MSE.

Conclusion and recommendations

The panel concludes that the composition of the staff does indeed facilitate the achievement of the intended international and intercultural learning outcomes.

Criterion 4b: Experience

Staff members have sufficient internationalisation experience, intercultural competences and language skills.

It was clear from the documentation and the dynamics of the panel interview sessions with academic staff that they work and think in an international mindset.

The flux of international staff mobilities, in and out of MSE, is an accepted and welcome feature for the faculty members. Thus, typically five faculty members spend a period of over six months abroad each year and two / three international visiting professors come to teach at MSE each year for a minimum stay of two months.

Each of the annual 170 student mobility experiences are supervised by an MSE faculty member in Saint-Etienne, increasing faculty members' own international understanding through students' international practises. In terms of internationalisation/interculturalism 'at home' the fact that 30% of all students on campus are international, further increases faculty and administration staff exposure to intercultural experiences.

With seven new English-taught international Masters of Science since 2016 all staff exposure to international students, many of whom speak little or no French, has also significantly increased, as well as the competence of academic and support staff, both oral and written in terms of dealing with the students on these English-medium MSc programmes.

Conclusion and recommendations

The panel concludes that staff members have sufficient internationalisation experience, intercultural competences and language skills. The panel recommends pursuing the institution's efforts to facilitate staff international mobility by capitalising on the opportunities offered by the IMT network.



Criterion 4c: Services

The services provided to the staff (e.g. training, facilities, staff exchanges) are consistent with the staff composition and facilitate international experiences, intercultural competences and language skills.

Good resources are deployed to enhance the English-language competences of staff and also to embed a strong structured delivery of a portfolio of modules in English. Such modules develop the language skills of French faculty and students as well as making MSE a more attractive destination for non-francophone students.

MSE offers clear and substantial support to staff on both the language learning front and in the facilitation and encouragement of staff to undertake sabbatical periods abroad, though these periods tend to be rather short—with durations of one to three months. Backfilling of professorial duties during sabbaticals appears to rely on the goodwill of faculty colleagues to cover absences or allow flexibility in lecture schedules. A more systematic level of support for staff availing of overseas sabbaticals would be an improvement on this situation and make it more attractive for MSE staff to avil of sabbatical opportunities

The practice of having an average of three visiting international professors per annum is to be commended and contributes to interculturalism at faculty level, as well as strengthening the focused overseas networks for future staff and student exchanges.

There is a clear focus on the achievement of student-level objectives in internationalisation and interculturalism as identified in the 4 International Monitoring Statistics (IMS) and the 9 Key International Performance Indicators (KIPI). These were elaborated by the PIRB. The soon to be constituted International Advisory Board would make a valuable input by establishing similar KPIs in terms of staff level supports and outcomes, fully necessary to achieve the aforementioned IMS and KIPIs.

Conclusion and recommendations

The panel concludes that the services provided to the staff are consistent with the staff composition. These services adequately facilitate international experiences, intercultural competences and language skills. The panel recommends the programme managers to encourage sabbatical periods abroad by organising a formal system to cover teaching staff absences.

Overall conclusion regarding Standard 4: Staff

The panel found that the constitution of the Programmes International Review Board and the planned International Advisory Board is an acknowledgement to the staff, and student body, of the priority MSE assigns to internationalisation. This is a strong support to staff in terms of delivering on international and intercultural objectives as additional dimensions to the core engineering education tasks at MSE. PIRB ICM Minutes - 29Nov2017 is a key document in this regard. The panel deems all the underlying criteria of this standard to be met. The panel therefore assesses *Standard 4: Staff* as good

Standard 5: Students

Criterion 5a: Composition

The composition of the student group (national and cultural backgrounds) is in line with the programme's internationalisation goals.

MSE is strongly oriented towards the diversity of the student group and does enjoy numerous and long-standing international partnerships. Thus, around one out of five MSE engineering students on the campus is non-French. A greater balance even occurs in the M1 years since the major part of mobility from both outgoing students and international incoming students are carried out at this period.

Furthermore, international incoming students have various origins (all continents are adequately represented, Details of figures are to be found in annex 7) since the school does limit the intakes of students from each of its international partners.

The number of international incoming students (2014-2017) has been increasing in the past three years. Among them, the proportion of degree-seeking students (that stay for the two years M1 & M2) has correspondingly risen (figures annex 8)

The school tries and maintains the rate of international outgoing student which has slightly decreased in the past years, although the number of active partnerships has steadily increased (Histogram page 4 of the 1st annex). Also benefiting from the whole IMT network, the school is mainly oriented towards its student mobility and cultural diversity rather than social mix.

Conclusion and recommendations

The panel concludes that that the composition of the student group is in line with the programme's internationalisation goals. The last update of the teaching programme and the recent monitoring of the figures can explain the trends which can be interpreted as reassuring. The panel recommends to strengthen the collaboration with the European partners, currently at just 22% of incoming mobilities, and to deepen partnerships with Anglophone countries which could have been more present in the student diversity.

Criterion 5b: Experience

The internationalisation experience gained by students is adequate and corresponds to the programme's internationalisation goals.

The working environment ensures acceptable internationalisation experiences at home. The quantity of technical courses and projects that are taught in English ensure an honourable development of international working skills. French and international students appear to be mixed in project groups (which construction is based on satisfaction and is supervised by professors, no rules do actually force the balance).

The guarantee of rooms at the hall of residence for international students ensures extracurricular internationalisation experiences for both national and international students. Besides, they can also enjoy extra-curricular activities such as getting involved in the student's international association which is, among others, responsible for the buddy programme offered to international students (see below)

The French students from Mines Saint-Étienne can aspire to all international destinations since places from each partners are guaranteed for all IMT's schools (students are not put into competition in the IMT network for their internationalisation experience) as far as possible. Students are deeply encouraged to carry out both international internships and an international academic mobility (although no concrete measure has been undertaken yet).



The panel had a good feedback from the students met during the visit. Both French and international students do confirm enjoying their experience at home or abroad. Either carried out or prepared mobility are strongly supported by MSE.

Conclusion and recommendations

The panel concludes that the international experiences gained by students are adequate. The panel appreciated the overall environment and the extra-curricular dynamic. The panel recommends to try and continue the work on these cultural aspects.

Criterion 5c: Services

The services provided to the students (e.g. information provision, counselling, guidance, accommodation, Diploma Supplement) are adequate and correspond to the composition of the student group.

The students are provided with a very diverse panel of services, both curricular and extracurricular; including social, cultural, logistical and financial aspects, dedicated to both outgoing and incoming students.

Incoming international students are indeed guided with basic proactive und voluntary information. The students stay in contact with the international incoming coordinator from their appliance and information sessions to cover their needs (regarding health insurance, transport, bank...) are organised. Degree-seeking students do have a personal tutor for counselling and guidance. The students may also take part in compulsory intensive courses if their French level hasn't proven to be sufficient. Besides, the guaranteed accommodation (at the Mines hall of residence) help them socialize and integrate themselves.

The students are invited to cultural events and they join social media. The integration weekend is now dedicated to French and international students. They can also enjoy a buddy programme for the whole year to facilitate their integration, thus having a French colleague's permanent help and completing the advice they access using the Student-written integration guide book (self-report 39, see annex 31). Furthermore, it has to be noticed that International degree-seeking students do have the same access to association and Alumni's network as French students.

The French students can, among other information sessions, get in touch with the staff and their outgoing colleagues at the annual international mobility forum. The school ensures that French students only have to pay for their home institution's tuition fees, wherever they are currently studying provided that a collaborating foreign destination has been chosen (the waiving of tuition fees do only apply to partner institutions and is difficult to apply to Anglophone universities). (p. 12 self-report). All French students are by the way qualified for the regional funding, which can be complemented with a grant given by the MSE Foundation (based on merit).

The students are required to write a report about their experience abroad, which is then available to the next school year. The report aims at providing all advice that may be needed regarding curricular and extra-curricular needs.

The students (both French and international) met by the panel expressed themselves and have proven to be satisfied with the provided services.

Conclusion and recommendations

The panel found the MSE's commitment convincing and concludes that the curricular and extra-curricular services provided to all students are suitable for their personal fulfilment in their international experience.

Overall conclusion regarding Standard 5: Students

The panel found MSE dedicated to its students. The panel deems most the underlying criteria of this standard to be successfully met. The provided services and the strong commitments can be regarded as examples. The panel is convinced that these aspects can be regarded as an exemplary practice. The panel therefore assesses *Standard 5: Students* as good.



5. Overview of assessments

| Standard | Criterion | Level of fulfilment for each standard unsatisfactory/satis- factory/good/excellent (see descriptions in chapter 4) | | |
|--------------------------|--------------------------------|---|--|--|
| 1. Intended | 1a. Supported goals | | | |
| internationalisation | 1b. Verifiable objectives Good | | | |
| | 1c. Impact on education | | | |
| 2. International and | 2a. Intended learning outcomes | Satisfactory | | |
| intercultural learning | 2b. Student assessment | | | |
| | 2c. Graduate achievement | | | |
| 3. Teaching and learning | 3a. Curriculum | | | |
| | 3b. Teaching methods | Good | | |
| | 3c. Learning environment | | | |
| 4. Staff | 4a. Composition | | | |
| | 4b. Experience | Good | | |
| | 4c. Services | | | |
| 5. Students | 5a. Composition | | | |
| | 5b. Experience | Good | | |
| | 5c. Services | | | |

Annex 1. Composition of the panel

Overview panel requirements

| Panel member | Subject | Internat. | Educat. | QA | Student |
|---|---------|-----------|---------|----|---------|
| Ms Isabel Avenas- Payan | Х | X | | Х | |
| Dr Eugenia Llamas | Х | Х | Х | Х | |
| Prof Barry O'Connor | | | | | |
| Prof José Turmo | Х | Х | Х | Х | |
| Mr Pavel Martin | Х | Х | | Х | Х |

Subject: Subject- or discipline-specific expertise;

Internat.: International expertise, preferably expertise in internationalisation; Educat.: Relevant experience in teaching or educational development;

QA: Relevant experience in quality assurance or auditing; or experience as student auditor;

Student: Student with international or internationalisation experience;

Chair: Full name, position, institution/company

Dr Eugenia Llamas is Director of International Relations and Head of the Department of Languages and International Culture at EIVP; as such, she is responsible for the institution's internationalisation policies and represents EIVP in various national and international organisations. Eugenia's passion for international relations began more than twenty years ago while still in Spain, where she was first Erasmus coordinator and then Deputy Director of the ETSIT at the University of Valladolid. At that time, Eugenia acted as an advisor for the implementation of the Bologna process in Spanish engineering degrees till 2005, when she moved to Paris. Eugenia currently belongs to the CTI (Commission des titres d'ingénieur) International Steering Committee as a special advisor in programme internationalisation, and regularly participates in accreditation and quality assurance procedures in France and abroad. She has been involved in CeQuInt as a core expert from 2013.

Full name, position, institution/company

Ms Isabelle Avenas-Payan joined CTI (Commission des titres d'ingénieur) in July 2016 as a member. She represents the association "Ingénieurs Et Scientifiques de France" (French Engineers and Scientists Association), where she is responsible for a committee that explains scientific and technical jobs to pre-university students in order for them to consider scientific studies. Isabelle is a computer engineer specialized in image processing and artificial intelligence. She lived several years in the USA as a Master's student (USC-Los Angeles) and as a consultant (MBY-New York). Since she joined CTI, she regularly participates in accreditation and quality assurance procedures of French schools of engineers. As a member of the CTI International Committee, she follows ECA meetings as the CTI representative and is part of the working group that deals with cross border education and employability.

Full name, position, institution/company

Dr Barry O'Connor is currently President of Cork Institute of Technology, having served as Registrar and Vice President for Academic Affairs at Cork Institute of Technology in Ireland



since 2008. He joined CIT in 2006 as Head of School of Mechanical & Process Engineering. Prior to taking up his current role, he had extensive experience as Lecturer and Researcher including 25 years in University College Cork (Ireland) and sabbatical periods in ENSIA (France), Michigan State University (USA), ESB Porto (Portugal) and Alfa Laval in Sweden. His research focus was in what has now evolved into the domain of Convergent Technologies. He has participated in many EU Research Reviews and in Academic Quality reviews, in both public and private sector Higher Education . He is a member of the French *Commission de Titres d'Ingénieur* panel of Experts, and an accredited ENQA reviewer, the European Association for Quality Assurance in Higher Education. Having graduated as an electrical engineer he initially worked as an engineer in the food and pharmaceutical sector in the UK and Ireland. He holds engineering and law degrees from UCC, a PhD from MSU and is a Fellow of the Institution of Engineers Ireland. A committed educator, he is currently Chairman of a Primary school Board, Cork's North Monastery CBS, and a member of the Board of Cork College of Commerce, Ireland's largest Further Education College.

Full name, position, institution/company

Jose TURMO (Spain, 1974) got his 6-year program degree in Civil Engineer (1998) from University of Cantabria (Santander, Spain) and his PhD (2003) in Construction Engineering from Technical University of Catalonia BarcelonaTech- UPC (Barcelona, Spain). At the moment, he is Professor in the School of Civil Engineering in Barcelona, BarcelonaTech (Spain), where he teaches Construction Engineering. His area of expertise is Construction and Maintenance of Concrete Bridges and Structures and Structural System Identificaction. Topics as different as structural behaviour of externally prestressed concrete bridges, applications of high performance concrete, shear strength of concrete structures, dynamics of cable suspended bridges, structural analysis of bridge construction, structural maintenance or model updating has been addressed by him, as well as improvement of health and safety and environmental issues of bridge construction. He has done several research stays as a postdoc, being appointed as Visiting Faculty at the Indian Institute of Technology, Madras (2005), Fulbright Scholar at the University of California, San Diego, USA (2006) and Kwang-Hua Visiting Professor (2010) and High End Foreign Expert (2014-2016) at the Department of Bridge Engineering, Tongji University, Shanghai, China. He has authored around forty SCI papers and seventy conference papers. He is member of ACHE, IABSE and IABMAS.

Full name, position, institution/company

Pavel MARTIN is a final-year double-master student (Diplôme d'ingénieur aux Arts et Métiers & MSc at the Karlsruhe Institute of Technology) and therefore has been living in Germany since September 2017. As a student representative, he has worked on teaching methods with the administrative and teaching staff, thus helping elaborating new guidelines for the reforms. Pavel has got involved in the CTI (Commission des Titres de l'Ingénieur) as Student Expert since 2017 and regularly takes part in evaluations and audits.

Coordinator: Full name, position, QA agency

Ms Marie-Jo Goedert, Administrative and International Director, CTI

Annex 2. Documents reviewed

- 1. Self-evaluation report
- 2. The documented internationalisation goals;
 - o "2017-21 Strategic Plan Summary" 🖫
 - o "Plan Stratégique 2017-21" 🖫
 - o "PIRB ICM Minutes 29Nov2017" 🖫
- 3. The programme's learning outcomes;
 - o "ICM programme ILO general reference framework"
- 4. Overview of the curriculum in diagrammatic form: "ICM Course structure 2017-18"
- 5. Description of the curriculum components: "ICM Syllabus 2017-18"
- 6. "Direct and indirect international ILOs ICM-17-18"
- 7. List of student assessments which can demonstrate achievement of international and intercultural learning outcomes and for each of these the type of assessment, the grading approach and the (international and intercultural) learning outcomes assessed;
- 8. Example of a Diploma Supplement;
- 9. Table of student population over the last three years;
- 10. CVs of the staff, with an overview of the nationality and international or internationalisation experience;
- 11. A list of international or internationalisation activities and/or projects related to education over the last three years and the programme's role in these;
 - "Current international programmes for education at MSE"
 - o "2014 CTI Accreditation renewal ICM objectives p22" 🖫
 - "ICM 4-page graduate prospectus"
 - "MSE International partners for research" & "MSE International partners for student mobility"
 - o "Abridged IMT COP 2013-17" 🖫
 - "Voted ICM degree-seeking student recruitment places 2017-18"
 - o "2014 CTI Accreditation renewal ICM international objectives pp35-36" 🖫
 - "Personalised tutoring system booklet" and "Student professionalisation guide"
 - o "ICM Graduates' careers six months after graduation" 🖫
 - o "Breakdown of timetabled ICM student activities" 🖫
 - o "2016-2017 Dynamo Days Communication Flyer French" 🖫

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- o "ICM classes taught in English 2017-18" 🔛
- o "MSE professor recruitment template" 🖫
- o "MSE Administration of studies staff" 🖫
- o "MSE International research collaborations" 🖫
- o "Team Teaching in English" Article & Presentation 🖫
- o "Flyer Welco'Mines 2017-18" 🔙
- o "FMI Programme nov 2017" 🖫
- o "Guide mobilité académique 2017" 🖫
- o "Student mobility reports 2016-17" 🖫
- o "Guide Mines Sainté English" 🖫
- O "Grand Oral Professionnel guide 2017"



Annex 3. Site visit programme

Overview

Date: 3rd and 4th July 2018

Institution: Ecole des Mines Saint-Etienne

Programme: ICM Master's Degree in Science and Executive Engineering

Location: Ecole des Mines Saint-Etienne, France

Programme

Tuesday 3rd July

12.00 - 13.30: Lunch at the Ecole des Mines. Room E111.

Panel members only

13.30 – 14.30: Meeting with management of the programme and head of the international department.

Brief introductory presentation of international strategy. Board Room.

Dr Pascal Ray, President
Xavier Olagne, Director of Studies
Dr David Delafosse, Director of Research and Innovation
Marc Roelens, ICM Programme Registrar
Paul Wheal, Head of International Department

14.30 - 15.30: Meeting with students. Room D201.

Helio Simadon Dos Santos Junior from UNESP, Sao Paolo, Brazil. M1 international degree-seeking student

Juan Felipe Porras Yaruro from Uni Andes, Columbia. M1 international degree-seeking student

Pauline Cohen. M1 student, 1st semester of study 2017-18 spent in Finland **Nicolas Lagaillardie**. M1 student, 1st semester of study 2017-18 spent in Japan **Kevin Clément**. President of "Mines International Students' Association". M1 student, 1st semester of study 2017-18 spent in Germany

Victoria Mondésir . Final-year student (M2). 1st M1 semester and end of M1 year internship both spent in Japan

Axel Curcio. First-year student preparing his first international mobility in Germany for September 2018

15.30 – 16.30: Meeting with *alumni*, employers and external partners. Room D117.

Patrick Bouzenot, Executive Director of ICM Alumni Association. Graduated in 1977

Stéphane Woerther, Managing Partner of Philae Advisory, Switzerland. Graduated in 2001 (video link)

Cédric Barrier, Chief Executive Officer of Pharos Education, China. Graduated in 2005 (video link)

Dr Hind Saidani-Scott, Senior Lecturer in Mechanical Engineering, University of Bristol (video link)

16.30 – 17.30: School visit for panel of experts with Xavier Olagne and Paul Wheal.

La Rotonde, student & staff relaxation area, classrooms, language lab, Alumni association, F1 lecture hall, foreign languages & cultures department, library, student working areas, boardroom, materials science lab. Short drive to the *Maison des élèves* student hall of residence.

18.00: (approx) Return to (or check-in at) Hôtel Astoria.

Panel members

Wednesday 4th July

8.30 - 9.30: Meeting with teaching staff. Room D201.

Carmen Acosta, Professor of Spanish, Head of Foreign Languages and Cultures Department

Liliane Bois-Simon, Professor of English

Dr Woo Suck Han, Professor in Biomechanics, Centre for Research in Biomedical and Healthcare Engineering

Dr Ana Cameirao, Professor in Industrial Crystallization, Centre for Research in Chemical Engineering

Dr Olivier Boissier, Professor in Computer Science, Henri Fayol Institute

Dr Guillaume Kermouche, Professor in Surface Engineering, Centre for Research in Materials Science and Mechanical Engineering

9.30 - 10.30: Meeting with members of the international department. Room D201.

Elisabeth Goutin-Burlat, Outgoing International Mobility Coordinator

Narjis Kournif, Incoming International Mobility Coordinator

Marta Tor, Erasmus and Regional Grant Coordinator. Support for incoming student resident permits

Laure Desage, Administrative support for German-speaking outgoing mobilities **Dr Laurent Perier-Camby**, Head of Professionalization Department

10.30 - 11.30: Panel discussion. Room D201.

Panel members only



11.30 - 12.00: Debrief meeting with management of the programme and head of the international department. Room D201.

Dr Pascal Ray, President Xavier Olagne, Director of Studies Marc Roelens, ICM Programme Registrar Paul Wheal, Head of International Department

12.00 - 13.00: Lunch at the Ecole des Mines. Room E111.

Panel members and school management.

End of site visit and departure

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