

Special Call 2020

The EIT Manufacturing Doctoral School Programme in 2021

Type of action: EIT Manufacturing EDUCATION - EMPOWER

Deadline model: single-stage

Opening date: 30 December 2020

Deadline date: 15 February 2020 17:00:00 Brussels time

Publication date: 30 December 2020

The EIT – Making Innovation Happen

EIT Manufacturing

www.eit.europa.eu



EIT Manufacturing is supported by the EIT,
body of the European Union

1 General Information: EITM Doctoral School

The EITM Doctoral School (DS) offers mobility, mentorship, networking, innovation & entrepreneurship, and business modules, to Ph.D. students. Graduated EITM PhDs will be prepared to generate start-ups or to be leaders of innovation within manufacturing companies and ecosystem, contributing to European competitiveness, environmental sustainability.

The overall responsibility for the EIT Manufacturing DS activity rests with the Doctoral School Head, who reports to the Director of Education, and to the EIT Manufacturing Scientific and Industrial committee.

The DS head and the SIC propose the yearly DS Programme guidelines and they are in regular contact with the local organisers, Innovation Leaders and the CLC managers to monitor the organisation, supervision of the DS budgets, the logistic operations and the co-creation of the programme. They deliver the overall progress and evaluation reports of the activity.

Program coordination support will be provided by the SIC and the EITM Doctoral School Head. Communication, marketing & sales support and admin support will be provided by the Doctoral School Office (DSO).

2 EITM Doctoral School Programme

The structure of the Doctoral School annual programme includes the following programme-wide activities:

1. Welcome ceremony (on-boarding of new students): an online event organized by current students and with the involvement of alumni.
2. Network-wide activities: including seminars/webinars and hackathons, given through either on-line (using the GLP) or face to face courses etc.
3. The exchange programme between labs and industry or academic stakeholders (secondments): exchange programme for the students of the doctoral school; students and prospective hosts should apply in January, while the exchange programme should be defined in February to be implemented from March till December.
4. Summer school: including a doctoral symposium where students can present their ongoing research activities and get feedback from peers (preparation is supported by the central team and organized by EITM partners; selection of partners is done through an annual call; these partners are responsible for defining the format, programme, and venue).

5. Winter school: including EITM Doctoral Academia Conference here students can present results; major indexing and publication should be sought and encouraged (preparation is supported by the central team and organized by EITM partners; selection of partners is done through an annual call; these partners are responsible for defining the format, programme, and venue).

6. EITM Venture programme: dedicated sessions offering to doctoral students working on manufacturing challenges across Europe. The goal of this programme is to help these doctoral students to strengthen their entrepreneurial spirit, to improve their creativity and system innovation skills. The programme includes training boot camps, company visits, business coaching, global networking events, and online resources.

Each of these programme-wide activities includes I&E Modules, which are described in the following section. The full programme must provide 30 ECTS in total.

3 EITM Doctoral School Programme in 2021

The Programme is organized in two sessions: one in Spring/Summer 2021 and a second one in Autumn/Winter 2021. One of the session must be located in RIS Countries. The programme is organized in ETCS unit value, where 1 ECTS is the equivalence of 25 hours, including both study in classroom and study time outside classroom.

3.1 Programme sessions composition

The two sessions must provide the following I&E modules.

- **Spring/summer 2021 programme (17 ECTS)**
 - **Delivery time: April – September 2021**
 - **It can be done either in presence or on line. If the consortium choose the option “in presence”, a risk plan must address a detailed alternative in case the COVID-19 situation won’t allow to have the programme as planned.**
 - Welcome by March/April: on line, or the consortium can include it during the seminar.
 - Seminar (eventually on line) plus one or more webinar series = 7 ECTS in total, + hackathons (2 ECTS) focused on a single topic with several challenges – 1 or 2 days events) – (EITM to propose some examples)
 - Summer school + Venture basic – 7 ECTS in total

- Mentorship by industrial partners – networking activity series (1 ECTS)
- Industrial Doctorate positions call – to “recruit” industries for PhD positions and secondments

The programme must focus on delivery Innovation and Entrepreneurship training in line with at least one of the EIT Manufacturing flagships and their main societal challenges objectives (see topics in section 4). The programme must cover at minimum the following OLOs (see annex 1 for OLO definition): OLO2, OLO3, OLO4, OLO6.

Expected budget for spring/summer programme is 60.000€, where at least 30% must be allocated to RIS Countries and RIS students.

- **Autumn/winter programme* (13 ECTS):**
- **Delivery time: September – December 2021**
- **It can be done either in presence or on line, if the consortium choose the option “in presence”, a risk plan must address a detailed plan in case the COVID-19 situation won’t allow to have the programme as planned.**
 - Winter school topic guidelines + Venture advanced (7 ECTS)
 - Webminar (3 ECTS) + Hackathon (2 ECTS focused on a single topic with several challenges – 1 or 2 days events)
 - Mentorship + Networking events series by industrial partners (1 ECTS)
 - Industrial Doctorate positions call – to “recruit” industries for PhD positions and secondments

*Closing graduation event not considered, since no students will get the certificate in 2021

The programme must focus on delivery Innovation and Entrepreneurship training in line with at least one of the EIT Manufacturing flagships and their main societal challenges objectives (see topics in section 4).

The programme must covered at minimum the following OLOs (see annex 1 for OLO definition): OLO1, OLO2, OLO4, OLO5, OLO7.

Expected budget for autumn/winter programme is 40.000€, where at least 30% must be allocated to RIS Countries and RIS students.

IMPORTANT NOTE: Please note EIT Manufacturing reserves the right to either modify the above proposed budget, to cancel the call and/or to not select any proposals, in case of EIT specific decisions on budget availability or other topics that may impact the Doctoral School programme. EIT

Manufacturing will inform the partners immediately through its website and application portal. Eventual submitted proposal won't be evaluated and the contact person will be informed via e-mail, wherever possible.

3.2 Guidelines for Summer & Winter Schools

The Summer/Winter School programme must bring together education, research and innovation within the context of a societal relevant theme for Manufacturing. Each Summer/Winter School has a clear topic within at least two EIT Manufacturing flagships and the societally relevant areas for them.

For the DS students of the EIT Manufacturing Doctoral School, the summer/winter school is a course of 7 ECTS as part of their Innovation and Entrepreneurship (I&E) minor. The course focuses on exercising the business development process within the context of the above-mentioned societal manufacturing theme. The learning outcomes, teaching methods and grading criteria for the I&E summer school course are defined in the ANNEX 1.

4 2021 Programme requirements

Programme definition and implementation are supervised by the EIT Manufacturing and jointly executed by the winning consortia.

- **Consortium:** at least 2 EITM Doctoral School Partner Universities (providing the location for the summer/winter School), at least 2 EITM Partner Industries (one of them could be a research centre).
- **Location:** at EITM Doctoral School Partner Universities (see ANNEX 2)
- **Programme Coordinator:** I&E teacher/expert will be considered a plus (can be external expert, even outside EITM, to be recruited through subcontracting budget)
- **Students evaluation body:** Evaluation committee made of Scientific and Industrial representative expert in I&E, overall where the Programme Coordinator is not an I&E expert
- **Contributors:** EITM partners (Universities, industries, research centers), I&E experts/companies, other experts
- **Number of students:** the consortium will deliver the activities of the programme first to the EITM DS students and it is responsible to recruit external PhD students and manufacturing and digital professionals (with a degree in engineering, and similar or a solid working background experience) for a minimum of 20 participants per activity (target participants n. 30 for summer/winter schools). External students are admitted under payment of a tuition fee to guarantee the financial sustainability of the programme.

- **Financial sustainability:** the programme is available for free to the EITM Doctoral School students up to 30 ECTS.

EITM Doctoral School students grants free access to one of the Summer/Winter School activities. For the second one they get special discounted tuition fee.

The consortium must consider a tuition fee for each activity or group of them, in case, for instance, of series of webinar, to ensure the programme financial sustainability. The final fee will be agreed with the EITM Doctoral School head.

- **Credits:**
 - Seminars and Webinars series - **I&E Basics** (10 ECTS) –
 - Hackathons – **Challenge-based I&E** (4 ECTS)
 - Summer and Winter Schools - **I&E programme courses** (7 ECTS)
 - Visits to companies, clusters and incubators - **I&E Labs for Business Development** (2 ECTS)
 - Venture Journey - **I&E Bootcamp** (7 ECTS)
- **Topics:** Four EIT Manufacturing flagships and its main societal challenges objectives:
 - Additive Manufacturing for full flexibility: Additive manufacturing processes enable almost limitless flexibility in product design, allowing full customer customization.
 - Zero Waste Manufacturing for a Circular Economy: Using new technology to minimize use of resources, energy, and material in production systems enables new circular business models.
 - Platforms for digitalized Value Networks: Collaboration and business on digital platforms and value networks enables companies to new and highly efficient value-chains.
 - People and Robots for Sustainable Work: Smart use of automation and robots enable great workplaces, flexible pro
- **Logistics:** for on site activities, such as summer/winter school, the hosting university must provide logistic coordination, including accommodation support, on site working space for courses, projects and hands-on activities, site visits, social programme etc. Hosts universities are not responsible for providing travel, participants will arrange their own travel to/from the location.
- **Communication & Dissemination:** a communication and dissemination plan must be provided for the programme, including the active participation of the participating students, I&E experts, industrial partners, teachers and other stakeholders. Participants success stories are encouraged to be collected and highlighted during the communication campaign.
- **Quality review:** specific quality review plan of the programme must be included into the proposal, also considering evaluation of the students OLO achievements at the end of the programme

5 Pedagogical approach

Main pedagogical approach must be “learning by doing”, in order the students to practice Innovation & Entrepreneurship skills and self-assessment of learned skill development.

Reflection time must be included into activities to allow the students to elaborate, reflect on and self-assess the new skills.

Innovative formats are allowed and encouraged to be used overall during Summer and Winter School (AI/VR learning, creativity labs, ideas proto-typing and so on).

The pedagogical approach must also allow the student to contextualize the Manufacturing Innovation inside societal challenges.

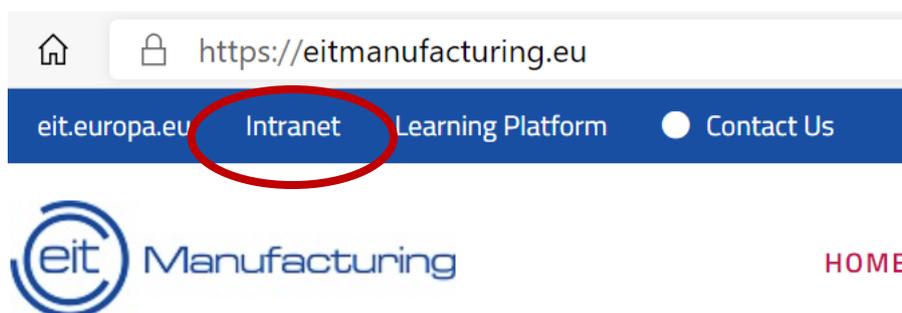
6 Who can apply

The call is open to EIT Manufacturing partners only. For Doctoral School partner universities, please see annex 2

Organizations/Individual experts that have not applied for or received partnership status are strongly encouraged to register to our experts area in Plaza. They will have the opportunity to participate to the programme as subcontractors according to the H2020/Horizon Europe and national legislation rules and other relevant local regulations.

In order to be considered for this education call, Innovation & Entrepreneurship and Education experts must register into the PLAZA system and fill the “EXPRESSION OF INTEREST TO BECOME ACTIVITY PARTNER” as follow:

- Once you have got your PLAZA credential, login into Plaza intranet



- In menu call for proposal 2021, choose “Expr. of Interest from ext. organisations”, or click on the following link:

https://plaza.eitmanufacturing.eu/PROMISE/PRIVATE/FORMS/view_data.aspx?guid=B8BA6FB0-D10C-4BA0-B7D8-881128BD4BFD&id=142



- Fill all the required fields
- In field “ADDED VALUE to EIT” include the following text: **EDUCATION I&E EXPERT**
- In field “SPECIFIC INTEREST” describe your expertise.

Please note it takes more than 48 hours to register into the system, so external experts are encouraged to register in time for the procurement process by the consortia.

7 Conditions and documents

Successful proposals are expected to be funded by the upcoming Horizon Europe funding framework in 2021. EIT Manufacturing is in contact with EIT to understand the new requirements. To be eligible for funding we expect EIT Manufacturing partners will have to accede to the Horizon Europe Model Grant Agreement in order to be funded.

1. **Eligible countries:** according to H2020 framework (see Annex A of the Work Programme). Minor changes could be expected when the Horizon Europe will be published.

For Associated Countries eligibility, please consult your National Contact Point.

For UK Partners and Linked Third Parties, and consortiums involving UK entities refers to H2020 framework guidelines as well or consult your national contact point.

2. **Eligibility conditions:** according to H2020 framework (see **Annex B** and **Annex C** of the Work Programme)
3. **Evaluation criteria and process:**

Note: EIT Manufacturing Doctoral School uses a portfolio approach to select the appropriate consortia and reserve the right to redistribute funding between programmes/activities depending on the quality of incoming applications and portfolio needs. This ensures all the activities of the programmes are delivered along the year and both spring/summer and autumn/winter programmes are organized and are in line with the quality programme expectations.

Excellence of the Programme:

- Are the objective of the programme and specific activities clearly described, measurable and achievable?
- Is the proposed programme in line with the OLOs and the EIT Manufacturing flagships and target societal challenges?
- Is the programme clearly described? Does it include all the requested activities (including networking events and I&E bootcamp) and in an appropriated timeline?
- Does the proposal consider Innovative pedagogical approaches? Will they result in a transformative learning experience?
- Does the proposal actively involve industries and research centers into the design and delivery of the activities?

Implementation:

- Is the working plan clear and adequate to meet the programme objectives?
- Is either the Coordinator an I&E expert or the committee of high quality from I&E point of view?
- Does the recruitment of experts is clearly defined (i.e. what kind of expert groups the consortium target to engage, from how many expertise?)
- Are the programme location facilities (overall for summer/winter school) in line with the requirements (i.e. RIS countries)? Are there public transport to reach the location? Are the location of any Manufacturing/I&E interest?
- Do the programme deliver gender focused activities and provide mechanism for the balance of the different students groups (for external students only)?
- Is there a clear and realistic view of risk/management implications related to the activity delivery

Dissemination & Communication:

- Are the dissemination and Communication plans well described?
- Do they include enough target groups and means of communications?
- Do they actively Involve participants, teachers and Industry inside the communication activities?

- Is there a clear plan for communicating with the students overall in summer/winter schools planning and delivery?

Impact:

- Does the proposal consider the longer term sustainability of the programme?
- Does the programme consider to engage external students to enlarge the impact of the activity?
- Does the programme propose actions/ideas about its impact beyond its one shot delivery?
- Does the programme proposes new ways and ideas to extend its impact beyond the target groups of students?

The reviewers will decide about the best provided list of activities and he the consortium will develop the activities under the SIC and EITM Doctoral School office advice and monitoring. Please read carefully all provisions before the preparation of your application.

1. Indicative timetable for evaluation and grant agreements:

- Deadline for submitting applications: 15/02/ 2021 17:00 (Brussels Time)
- Evaluation period: February/March 2021
- Information to applicants: March 2021
- Signature of grant agreement: March 2021

8 Submission

Proposal template is available in ANNEX 3 and it must be submitted in pdf format.

Proposals can be submitted at any time from the launch of the call until 17:00 (Brussels Time) of the of the closing day as indicated in the timeline section of this document.

All applications must be submitted via Plaza, uploading the pdf file of the proposal, according to the template in ANNEX 3. The link and instructions for the submissions will be communicated after 11th January 2021.

Please note: No extensions will be granted. Any changes to the proposal requested by the applicant after submission will not be allowed.

9 GDPR

Applications and participants data are treated according the EIT Manufacturing GDPR rules:

<https://eitmanufacturing.eu/privacy-policy/>

Submitting your proposal you agree about those rules.

10 Appeals and Complaints

Appeals about the proposal evaluation process can contact the EITM Doctoral School office not later than two days after receiving the results of the evaluation: doctoralschool@eitmanufacturing.eu

ANNEX 1: Overarching Learning Outcome

EIT Overarching Learning Outcome (OLOs): see table below

| |
|--|
| EIT OLOs |
| EIT OLO 1 - Making value judgments and sustainability competencies |
| The ability to identify short- and long-term future consequences of plans and decisions from an integrated scientific, ethical and intergenerational perspective and to merge this into their professional activities, moving towards a sustainable society. |
| EIT OLO 2 - Entrepreneurship skills and competencies |
| The ability to translate innovations into feasible business solutions and to lead and support others in this process |
| EIT OLO 3 - Creativity skills and competencies |
| - The ability to think beyond boundaries and systematically explore and generate new ideas and to inspire and support others in this process and contribute to the further development of those ideas. |
| EIT OLO 4 - Innovation skills and competencies |
| The ability to apply their research experiences combined with the knowledge, ideas and technology of others to create, test and implement new or significantly improved products, services, processes, policies, new business models or jobs. |
| EIT OLO 5 - Research skills and competencies |

The ability to produce cutting-edge original research and to extend and develop cutting-edge research methods, processes and techniques towards new venture creation and growth also using cross-disciplinary approaches.

EIT OLO 6 - Intellectual transforming skills and competencies

The ability to autonomously and systematically transform practical experiences into research problems and challenges and to lead and support others in this process.

EIT OLO 7 - Leadership skills and competencies

The ability of decision-making and leadership based on a holistic understanding of the contributions of higher education, research and business to value creation.

ANNEX 2: Doctoral School partner Universities

Doctoral School activities, such as summer/winter schools, are requested to be hosted by EIT Manufacturing Doctoral School partner universities.

You can find their public contacts at EIT Manufacturing partners web page:
<https://eitmanufacturing.eu/partners/>

List of those partners is available here below.



Arts et Métiers Institute of Technology (Arts et Métiers)



Czech Technical University of Prague (CTUP)



Grenoble Institute of Technology and Management (G INP)



Slovak University of Technology in Bratislava (STUBA)



Faculdade de Engenharia of the University of Porto (FEUP)



University of Tartu – Institute of technology (TARTU)

ANNEX 3: Proposal template

Doctoral School Programme Proposal

Activities 21272 & 21317

[Proposal Name]

TO BE DELETED:

- Maximum number of pages 20, including cover, index and budget sheet
- Font: Calibri Light
- Minimum font size 11pt, including tables content

| Contacts: | | | |
|------------------|---------------------------------------|-----------------------|--------------------------------|
| [Partner Name] | [Partner Main Contact – Name Surname] | [Main Contact e-mail] | [Phone Number of Main Contact] |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Contents

| | |
|--|----------|
| 1. Excellence | 6 |
| 1.1 Project objectives | 6 |
| 1.2 Relations to OLOs, flagships and societal challenges..... | 6 |
| 1.3 Description of the proposed Programme activities | 6 |
| 1.4 Description of the pedagogical methodology and approach | 6 |
| 1.5 Description of consortium expertise towards the programme..... | 6 |
| 2. Implementation | 6 |
| 2.1 Workplan | 7 |
| 2.2 Gender | 8 |
| 2.3 Risk Management..... | 8 |
| 2.4 Project & Quality management..... | 8 |
| 3. Dissemination & Communication: | 8 |
| 3.1 Communication, Dissemination & Citizen Outreach | 8 |
| 4. Impact: | 8 |
| 4.1 Financial Sustainability and potential funding streams | 9 |
| 4.2 Impact beyond the programme delivery | 9 |
| 5. Budget | 0 |

1 Excellence

1.1 Project objectives

1.2 Relations to OLOs, flagships and societal challenges

1.3 Description of the proposed Programme activities

1.4 Description of the pedagogical methodology and approach

Describe the pedagogical methodology and approach to allow the students to reach the expected OLOs, as described in ANNEX1, and to reflect on their I&E skill development and to be supported in their venture journey.

1.5 Description of consortium expertise towards the programme

2 Implementation

2.1 Workplan

Please provide a summary of the project work plan:

- Include a task per each activity/series of activities and the partners involved.
- Include info not only on the teaching programme, but also about logistic, social activities, communication, students awards (money prizes are not allowed in this activity) etc.
- Include a plan for students individual and peer reflection per each activity/series of activities.
- Include a clear plan about the experts subcontracting and the external students recruitment.
- List expected outputs

| TASK ID | Expected Start Date | Expected End Date | ECTS | Partner 1 | Partner 2 | Partner 3 | | | |
|------------------|---------------------|-------------------|------|-----------|-----------|-----------|--|--|--|
| | | | | | | | | | |
| TASK Objectives | | | | | | | | | |
| TASK Description | | | | | | | | | |
| Expected outputs | | | | | | | | | |

- List appropriate number of deliverables to report about the programme implementation and results, including communication and dissemination activities

| DEL ID | Partner | Title | Description | Task Reference | Expected date |
|------------|---------------------|--|-------------|------------------|------------------|
| DEL number | Partner ID and name | DEL Title i.e. Summer School final report | | Task ID and name | i.e. 31 Oct 2021 |
| | | i.e. Communication & Dissemination | | | i.e. 31 Oct 2021 |
| | | | | | |

2.2 Gender

Specify plans to engage and recruit external students with gender balance and inclusion and to deliver a programme that consider diversity and inclusion.

2.3 Risk Management

List risks and management strategies. Please ensure to include risk analysis and mitigation related to COVID-19.

2.4 Project & Quality management

List project management and quality monitoring and review overall from I&E point of view

3 Dissemination & Communication:

3.1 Communication, Dissemination & Citizen Outreach

Describe objectives and target groups for Communication, Dissemination & Citizen Outreach
Detail how you would intend to engage manufacturing ecosystem in local area, beyond the participants of the programme
Detail how you would engage and build communities online, in case of online programmes

4 Impact

4.1 Financial Sustainability and potential funding streams

Describe the value of the proposed programme in terms of financial sustainability fee, to be later on discussed with the Doctoral School Management

Please list additional financial sustainability opportunities, overall in case of other mechanisms beside learning activity fees.

4.2 Impact beyond the programme delivery

- List any long term benefit of the proposed programme for the target groups of students and the Doctoral School.

5 Budget

Please note, money prizes are not allowed in this activity.

| Partner | FT E | 4000 - A Personnel | 4172 - B Sub-contracting | D1 Travel and subsistence | 4135 - D2a Depreciation | 4141 - D3 Cost of other goods and service | 4130 - D4 Cost of Large Research Infrastructure | 4133 - D5 Costs of internal invoice d goods and services | 4170 - E Indirect costs |
|---------|------|--------------------|--------------------------|---------------------------|-------------------------|---|---|--|-------------------------|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |