

# Пучково-плазменные системы и технологии

Московский физико-технический институт (национальный исследовательский университет)

Присваивается степень или квалификация: **Диплом магистра по направлению 03.04.01 «Прикладные математика и физика»**

Язык обучения: **английский**

Форма обучения: **Очная**

Продолжительность: **2 года**

Возможность бесплатного обучения: **есть**

Стоимость: **400 000 руб. в год**

Страница программы на сайте вуза: <https://mipt.ru/english/edu/master/beam-plasma>

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The programme is targeted at fundamental and applied researches in plasma physics and plasma chemistry associated with advanced technologies; it is based on the system approach to the beam-plasma systems and to their life-cycle support.

## KEY ADVANTAGES:

Electron-beam systems are known to be very effective to settle a number of technological problems or to carry out certain missions on spacecraft board. The Master Programme gives students unique chance to study advanced industrial and aerospace applications of the Electron-Beam Plasma. The Programme is interdisciplinary and joins physical, chemical, engineering and biomedical aspects. All fundamental and applied problems are considered on the basis of system approach. Students acquire basic knowledge and professional skills and then they can elect specialization in scientific, engineering or business fields. In any case practical training by means of labs and participation in real projects are the main part of the educational process.

## TEACHING METHODS:

The curriculum of the Programme includes basic, vocational and elective studies. The vocational studies may be compulsory or optional. Students extend and enhance their knowledge and professionalization electing a particular specialization in scientific, engineering or business fields. In any case practical training by means of labs is the main part of the educational process. All students are to study in practice:

- Electron-Beam Plasma generators and their separate parts: electron guns, high-voltage power sources, injection windows, supporting sub-systems of the plasma setups;
- Electron-Beam Plasma assisted processes in solids: heating, phase transfers, ablation, spattering, surface modification, electrostatic charging, organic and bioorganic materials modification;
- Electron-Beam Plasma stimulated processes in gases and aerosols.

At the final stage of the training course students are gathered in teams to carry out the joint project. Students can choose between commercial industrial beam-plasma systems and the systems oriented on aerospace sector.

## Специализации в рамках данной программы