### Distinguished Education and Research

#### Leading Program for Doctorate Degree New Frontier Leading Program for Rare-metal and Resources

(Period of implementation: Adopted FY2012 - FY2019)

Education

The "Resource New Frontier Special Education Course" was established in the Graduate School of Engineering and Resource Science. In addition to studying conventional resource economics, further environmental conservation and resource literacy, biological effects of rare earth, etc., knowledge and skills required for cultural understanding and international relations are fostered with the aim to nurture human resources, "resource new frontier leaders", with the ability to survey and tackle the issues regarding international resource development in the 21st century.

#### Improving Education to Meet the Needs of Industry/Enhanced System Maintenance Project. Hokkaido – Tohoku Block

 Developing human resources who will pioneer the future of the region and society through a cooperation of industry, government and academia –

(Period of Implementation: Adopted FY 2012 - FY 2014) Since FY2010, we have implemented the university education reform that focuses on cultivating the future workforce as its foundation, and aims for further systemization and improvement of career education, offering highly cooperative student support for "career development", "fostering basic skills as a member of society" (=skills necessary in society), and "job hunting". We provide various types of support in order to encourage career development such as organizing career development courses, conducting fieldwork with the cooperation of the business community, etc.

#### Project to Support the Development of Students of Math and Science. A program to train scientists rich in innovative ideas.

Helix Project - Developing the potential of those who stand out

(Period of Implementation: Adopted FY2011 - FY2014)

Students with exceptional math and science skills and motivation are selected, and provided with a system of opportunities to receive an instruction in scientific English from native teachers, a special curriculum, attend seminars, be relegated to a research lab early, etc. from the their first year. They are given the chance to visit universities abroad, as we aim to nurture researchers rich in innovative ideas who can one day participate in the international arena.

#### Oncology Professional Training Plan A plan to promote training the next generation of specialists in treating cancer

(Period of Implementation: Adopted FY2012 - FY2016)

This is a team project with 4 universities in Tokyo, including Tokyo Medical and Dental University and Hirosaki University. We are working towards a plan to fight cancer. The aims of the program are to ① Obtain a variety of minimally invasive cancer treatment methods ② Training of comprehensive clinical oncologists ③ The spread and promotion of community healthcare for cancer treatment ④ The promotion of clinical cancer research and the practical application of its results ⑤ Training human resources who can be involved in the development of equipment necessary for cancer treatment ⑥ Training oncology pharmacists who can contribute to the improvement of scientific cancer therapies.

## Akita University "Base of Region (and Intelligence)" Maintenance Project (COC project)

- Building a community in the face of an independent aging society, respecting the value of each individual member—
(Period of Implementation: Adopted FY2013 - FY2017)

The Ministry of Education, Culture, Sports, Science and Technology's new subsidiary project of FY2013. As promoting participation in local business by the municipalities of Yokote, Kita Akita and Katagami and cooperation on projects with local residents, we are creating the "Akita Original Regional Model" giving hope to even the ultra aging society, positioning the university to be loved and deemed necessary by the local area.

# Strategic International Collaborative Research Program. Science and Technology Research Partnership for Sustainable Development (SATREPS)

Research on the Integration System of Spatial Environment Analyses and Advanced Metal Recovery to Ensure Sustainable Resource Development

(Period of Implementation: Adopted FY2014 - FY2018)

In Serbia, a copper resource developing area troubled by environmental pollution, far-reaching environmental assessment restoration system research development is conducted with the aim to find balance between development and the environment, which is indispensible to sustainable resource development, through combining advanced remote sensing data and surface data to create three dimensional environment evaluation and analysis and integrating it with metal recovery technology.