

Sub-program	1. Realization of Sustainable Economic Growth and a Stable Society	
Component (Development Issues)	1-2-2. Promotion of Industry and Mining Development	
Target Organization	Ministry of Industry, Mines and Energy / Ministry of Labor and Vocational Training / Ministry of Public Works and Transport / Electricity of Cambodia / Cambodia National Petroleum Authority / Lecturer of National University (faculty of science and engineering field only)**	
Background	<p>“Private Sector Development and Creating Employment” is one of the foremost issues given in the National Strategic Development Plan Update 2009-2013. Among them, strengthening of the private sector through attracting investment is important in terms of diversifying industries and rectifying vulnerable economic structure which is over-dependent on 4 main industries, namely agriculture, construction, garment and tourism sectors.</p> <p>In line with the policy to promote industry diversification through attracting foreign direct investment to the Special Economic Zone (SEZ), the Cambodian government is now rushing to build the infrastructures such as roads, ports, railroads, bridges and electricity as well as software infrastructures such as laws, systems, organizations, modern procedures (custom clearance, investment application etc.) and human resources with support of donor partners.</p> <p>Some of the Japanese companies, who are facing problems of frequent labor disputes, elevated labor cost or difficulties in securing stable human resources in some of the Asian Countries, are now starting to look for new investment destination in the region which provides cheaper labor in order to avoid risk of concentration of production base. Cambodia which is located in the center of Indochina, politically-stable and rapidly improving its infrastructure is one of the candidate countries for those companies and there are increasing numbers of Japanese companies who considers Cambodia as a new investment destination.</p> <p>However, Cambodia is left behind the neighboring countries in human resource development for industry, especially for engineering and technicians, thus there is a concern that lack of human resources becomes disincentive for strengthening of private sector, industry diversification as well as promotion of investment.</p>	
Component	Objective/Research area	Outline of university program
1-2-2. Promotion of Industry and Mining Development	<p>In order that Cambodia might continue to achieve sustainable economic development, maintenance of infrastructure including national grid extension, urban development, diversity of industries and promotion of private investment in plant and equipment, it is essential to develop human resources in the following fields;</p> <p>[Electrical engineering field] Human resource in the electrical engineering field who is involved in the fields of power generation, power supply, power transform, power distribution, facility equipment for factory/condominium/office building, and electricity/telecommunication equipment needed to be developed.</p> <p>[Mechanical engineering field] Human resource in the mechanical engineering field who is involved in mechanical equipment in manufacture industry and/or factory automation needs to be developed.</p> <p>[Natural resources and energy engineering field] Human resource who deals with approval and authorization for the development of mining and industry resources which have been found by survey/trial digging needed to be developed.</p> <p>*The priority target in above mentioned fields is to improve skills and knowledge of government officials/technical officials with engineering background who is capable of conducting appropriate regulation, supervision and management. However, considering the importance of capacity building of educational institutions equipped with faculties in engineering fields, where said government officials/technical officials mostly studies, the lecturer at educational institutions equipped with faculties in engineering fields will be the target of this component.</p>	<p>[Tokai University] 1) Electrical Engineering field We offer a wide variety of classes in the field of electrical and electronic field such as power engineering, system engineering, and semiconductor engineering. And we assign faculty members who are able to teach them in English. Especially, in the field of power engineering, classes on energy generation, energy transportation, energy usage, and energy analysis are offered in a systematic manner. In addition, classes on solar cells and fuel cells that are expected as next-generation energy source are also offered. Furthermore, we offer classes on fundamental mathematics, electromagnetism, circuit analysis, etc., which are common in the electrical and electronic field, so that the students can improve their basic knowledge. Students' research themes are selected from the topics given by the professors, and the researches are supervised by the professors. The students prepare master thesis based on their research results. Students are given the opportunities to make presentations at international conferences.</p> <p>2) Mechanical Engineering field (i) Learning the whole region of Mechanical Engineering, Applied Material Mechanics, Micro Processing, Combustion Engineering, Compressible Fluid Mechanics, Tribology, Robotics, Multi-body Dynamics, and so on, the foreign students can obtain the fundamental knowledge to solve a given theme. (ii) Learning the fundamental theory with respect to Factory Automation, Advanced Dynamics, Statistics for Engineers, Control System, Human and Mechanical Engineering, Remote Sensing System, Cost Engineering, and so on, they can use the knowledge to solve a given theme. (iii) Adopting Robotics, Electromagnetic Levitation, Web Handling, Processing of Wire Drawing, and Development of Thin Film as fundamental technologies for Factory Automation, the course gives the foreign students respective research themes that are chosen by them. (iv) They make a presentation of the above results in domestic and foreign conferences and make a master's thesis as a comprehensive compilation of the results.</p> <p>[Kyushu University] Earth Resources Engineering field (i) To foster engineers and researchers having creativity and power of new idea in global scale through sustainable and environmentally adaptive development of energy and mineral resources (ii) Provide higher education on earth resources, energy and mineral resources, from exploration to exploitation and utilization, recycling and remediation stages (iii) Curriculums on Engineers Ethics, Applied Engineering, Professional Academic Capacity, Sustainable Learning Ability, Communication Capacity, Management Capacity, Internationality, Leadership.</p>