

Sub-program	1. Realization of Sustainable Economic Growth and a Stable Society	
Component (Development Issues)	1-2-1. Improving of Social and Economic Infrastructure	
Target Organization	Ministry of Public Works and Transport / Ministry of Industry, Mines and Energy / Ministry of Posts and Telecommunications / National Information Communications Technology Development Authority (NIDA) / Ministry of Land Management, Urban Planning and Construction / Ministry of Rural Development / Ministry of Environment / Ministry of Tourism / Phnom Penh Water Supply Authority / Electricity of Cambodia / Sihanouk Ville Autonomous Port / Phnom Penh Autonomous Port / Telecom Cambodia / Siem Reap Water Supply Authority / Phnom Penh Public Works & Transport Department / Siem Reap Public Works & Transport Department. *All the provincial department for public works & transport are eligible./ Lecturer of National University (faculty of science and engineering field only) **Lecturer who can submit public servant ID or equivalent documents only	
Background	<p>In Cambodia, the fragile network of roads, airways, waterways, railways, etc. for passenger and cargo transport has impeded access to markets, schools, health and medical care facilities, and other sites essential in daily life, and in turn, this has lowered the living standards of the people.</p> <p>It has also hampered socioeconomic development including the promotion of tourism development and moves to attract investments that back up national development. These issues are also addressed in Cambodia's Rectangular Strategy and its Second Socioeconomic Development Plan, as well as the need to improve the traffic and transportation network. In particular, high priority has been given to improving provincial and rural roads to improve the living standards of the poverty group that live in the rural areas. In addition, the Cambodian government recognizes the importance of contributing international routes to the GMS and the Asian Highway project that allow efficient transport between neighboring countries.</p> <p>Deterioration of the roads due to vehicle weight and a traffic safety are issues that have become prominent in conjunction with the country's development; and the need to address these issues has gained importance. Although improvements to one national highway has been ensured with donor cooperation, establishing a maintenance and control system to maintain optimum road conditions in future has become an urgent issue.</p> <p>In conjunction with the rapid population growth in Phnom Penh, urban areas continue to expand under a fragile regional administration.</p> <p>With French assistance, a city plan has been drafted, but this plan that includes the regulation of land-use has not been implemented to date.</p> <p>The wetland and lake area real estate have been haphazardly bought up by the private sector; landfills have progressed and there is concern that this will affect natural purification of the city's drainage and sewage in the near future.</p> <p>In relation with it, as urbanization progresses without improving the sewage system, public health problem will rise ever than before.</p> <p>In addition, with this urbanization and growth of population and traffic, there is also concern of air pollution.</p> <p>Further, in the area of information communications, Cambodia has only one main communications network that traverses longitudinally, and the fragile communications infrastructure has impeded economic development.</p> <p>The lack of human resources capable of appropriate maintenance and control of the communications network has also delayed development and correcting the information gap between urban and rural areas is also an issue.</p> <p>JDS Fellows are expected to acquire the knowledge useful for policy making and implementations on the planning and progress evaluations, operations and maintenances of infrastructural development of networks in roads, airways, water ways, rail ways.</p>	
Component	Objective/Research area	Outline of university program
1-2-1. Improving of Social and Economic Infrastructure	<p>[Objective] Human Resources in science and engineering field and involved in "Improving of Social and Economic Infrastructure" improve knowledge on policy making and implementations on the planning and progress evaluations, operations and maintenances of infrastructural development of networks in roads, airways, water ways, rail ways.</p> <p>[Research Area] Although there are several projects planed or implemented in Cambodia based on BOT and BOO policies that use the private sector to improve electricity, communications, major airports, ICT, and other infrastructure, issues remain such as project management skills that are needed to produce the outcome initially projected. On the other hand, under loans and grant aid cooperation by several donors, improvements on major highways and airports have been implemented, but the increase in transportation volume, traffic congestion and other problems do not appear to have been taken into consideration.</p> <p>There is a need to develop human resources that are capable of reviewing infrastructural improvement plans and overseeing their progress, while taking these issues into consideration, as well as drafting and implementing their operations, maintenance, and control after they are completed.</p> <p>* Human resources who have background in field of science and engineering field are preferable</p>	<p>Learn the Development Technology Course of the Graduate School to study global viewpoints on the earth system and environmental science, and acquire local and practical development technology on drainage basins, ecosystems, architecture, cities and traffic.</p> <p>In this process, Regional and Urban Engineering, Transportation Engineering, Transportation Planning, Tourism Policy, Grand Disaster Prevention Engineering, Architectural Prevention, Environment Simulator, Marine Hydrodynamics, Marine Environmental Conservation, Environmental Monitoring, Botany Resources for the Future and sustainable architecture are provided as special subjects.</p> <p>In this program, while improving the environmental development education and the environmental management ability in the relevant country through such subjects, the students will learn individual problems for traffic network infrastructure improvement such as road management, construction of road networks and port administration through research guidance for a master's thesis.</p> <p>Then, aims to foster transportation administrators with the environmental management ability through the education research concerning the building of eco-friendly traffic transportation systems for sustainable urban development.</p>