

## PROJECT'S KEY COMPONENTS, OUTPUTS AND ACHIEVEMENTS

Design Summary	Targets	Achievements at PCR	Achievements at OEM
<p><b>1. Sector and Area Goals</b> To improve the quality, relevance, and capacity of engineering education, and to enhance the access to such education by economically disadvantaged but qualified students who want to study engineering.</p>	<p>Build adequate resource capacity and technical knowledge for continuing improvement in the quality and supply of engineering education.</p>	<p>Ministry of National Education established the National Accreditation Board (Badan Akreditasi Nasional or BAN). Several rules and regulations on curriculum, learning process evaluation and monitoring related to quality improvement also were established.</p> <p>Resource capacity and technical knowledge have been improved in the quality and supply of engineering education.</p>	
<p><b>2. Proposed Objectives</b> 2.1. To improve the quality, relevance, and capacity of engineering education. 2.2. To increase access to engineering studies by qualified students.</p>	<p>Improve the academic standards of engineering education and its relevance to the requirements of industry. Increase the capacity of engineering education programs at university and polytechnic level, and provide more opportunities to study in higher quality programs.</p> <p>Ensure engineering graduates have mastered necessary skill, knowledge, and work attitudes.</p> <p>Strengthen the institutional and technical capacity of Directorate General of Higher Education (DGHE) to plan and manage engineering education in the context of new engineering demands.</p>	<p>The academic standards of engineering education and its relevance to the requirements of industry have been improved.</p> <p>Increased 25,632-student capacity of engineering education programs at university and polytechnic level and provide more opportunities to study in higher quality programs.</p> <p>Improved curriculum and education facilities ensured engineering graduates have mastered necessary skill, knowledge, and work attitudes.</p>	

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<p><b>3. Project Components and Outputs</b> 3.1. Improving Quality and Relevance</p> <p>-Quality assurance mechanism operational.</p> <p>-Industry-institutions link improved.</p> <p>-Engineering course and curricula reviewed and updated.</p> <p>-Staff of selected private institutions trained.</p> <p>- University engineering programs upgraded.</p> <p>-Engineering programs in polytechnics upgraded.</p>	<p>Engineering Quality Assessment Committee established to support links with industry.</p> <p>Engineering Program Relevancy Fund (PRF) established to support links with industry.</p> <p>Course and curriculum development program designed to generate specific areas of expertise and training in curricula development.</p> <p>Quality of teaching staff raised through overseas and in-country fellowships and training.</p> <p>Strengthen seven bachelor-level engineering programs in six universities</p> <p>Upgrade 22 diploma engineering programs in seven polytechnics.</p>	<p>Engineering Quality Assessment Committee established, supported by 24 person-months of international consulting services and 96 person-months of domestic consulting services by quality assurance specialist to match links with industry.</p> <p>Under PRF, 341 research topics completed.</p> <p>Course and curriculum development, supported by 48 person-months of international consulting services and 96 person-months of domestic consulting services by curriculum specialists. It included a program designed to generate specific areas of expertise and training in curricula development.</p> <p>254 fellows completed overseas master's and doctorate programs, while 531 fellows completed domestic master's degree program.</p> <p>458, 519, and 63 fellows completed S1 Plus, S1 Special, and D4, respectively.</p> <p>Seven bachelor-level (5 in civil engineering [CE], 1 in mechanical engineering [ME], and 1 in electrical engineering [EE]) and five diploma (2 CE, 1 ME, 1 ChE , and 1 EE) engineering programs in six universities were strengthened</p> <p>22 diploma engineering programs (7 CE, 7 ME, and 1 ChE) in seven polytechnics were upgraded.</p> <p>The upgraded programs were supported by 138 person-months of international and 228 person-months of domestic academic consultants. It</p>	

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		also included the upgrading of civil works, 41 packages of laboratory equipment, three packages of teaching aids, and 2079 titles of engineering books.	
<p>Private institutions supported.</p> <p>3.2. Enhancing Capacity, Access, and Participation</p> <p>-Capacity of university and polytechnic programs increased.</p> <p>-Student Financial Assistance scheme for engineering study operational.</p> <p>3.3. Strengthening Institutional Capacity</p> <p>-Improved capacity to plan, undertake research, and manage project.</p>	<p>Awarded overseas and in-country fellowships programs, reference books, and student grants for private institutions.</p> <p>Create additional 4,000 student slots in 3-year polytechnic diploma programs.</p> <p>Create additional 3,000 student slots in university engineering programs.</p> <p>Establish six bachelor-level (3 EE, 2 ME, and 1 ChE) and 4 3-year diploma (2 ME and 2 EE) engineering programs in five universities.</p> <p>Improve opportunities for 1,300 women and economically disadvantaged students to study engineering through student loan scheme.</p> <p>Improve systems and procedures for DGHE.</p>	<p>20, 12, and 131 fellows completed overseas master's, overseas doctorate, and domestic master's degree programs, respectively. Engineering books for reference and student grants also were provided to private institutions.</p> <p>Additional 4,000 student slots were created in 3-year polytechnic diploma programs.</p> <p>Additional 3,000 student places were established in university engineering programs.</p> <p>Six bachelor-level (3 EE, 2 ME, and 1 ChE) and 4 3-year diploma (2 ME and 2 EE) engineering programs in five universities were established.</p> <p>Student loan scheme could not be implemented due to economic crisis, but the Project provided 27,497 student grants to disadvantaged engineering students. More than 1,300 women benefited from the grant scheme.</p> <p>The systems and procedures for DGHE were improved by a series of workshops and benchmarked to reputable higher education institutions overseas.</p>	

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	<p>Tracer studies of graduates and study in private engineering institutions undertaken.</p> <p>Timely and successful implementation of the Project.</p> <p>Strengthening management of higher education institutions.</p> <p>Strengthening management information system and project benefit monitoring system (BME).</p>	<p>Tracer studies of graduates and study in private engineering institutions have been undertaken.</p> <p>Project implementation was extended for 1 year to ensure the sustainability of the Project investment.</p> <p>72 staff from DGHE, technical team, and project institutions benefited from course development in US, Australia, Canada, UK, Singapore, Malaysia, etc.</p> <p>68 high officials from project institutions benefited from benchmarking to overseas engineering institutions in Canada, Europe and Australia.</p> <p>Information and Communication Technology facilities were provided to 13 project institutions supported the BME system.</p>	

CE = Civil Engineering ChE = Chemical Engineering EE = Electrical Engineering ME = Mechanical Engineering OEM = Operational Evaluation Mission.