

The National Polytechnic Institute of Papua New Guinea

Department of Architecture, Building & Civil Engineering

Diploma in Civil Engineering

For further information contact:

The Head of Architecture, Building & Civil Engineering Department
The National Polytechnic Institute of PNG
PO Box 4366 LAE,
Morobe Province 411

Phone: (675) 472 2555 / 472 1508 / 472 7530 Ext 129/118

Fax: (675) 472 1025 or (675) 472 6693

Email: npi_hodbc@datec.net.pg / polytec.acad.clerk@gmail.com

*"Enroll at National Polytechnic Institute of PNG for a brighter
future"*

DIPLOMA COURSE in CIVIL ENGINEERING

AIMS:

The course is designed to provide a sound high quality program of study for prospective Civil Engineering Technicians. It is highly relevant to the development aims of PNG at all levels. It enables graduates to:

- Develop the ability to supervise various Civil Engineering projects
- Appreciate requirements of structural designs
- Gain a sound knowledge of scientific and mathematical principles
- Gain a sound knowledge of computers and their usage, and computing problems
- Develop skill in the installation and use of operating systems such as MS-DOS and Windows, and several general and relevant Windows-based software packages
- Develop either skills in civil/structural drafting or understanding of construction methods
- Obtain, record, and reduce measurements using survey equipment
- Develop abilities in communication
- Correctly choose and use construction materials.
- Do design calculations on road works, water supply, sewerage and drainage systems.

COURSE OUTLINE:

Stage ONE	Hrs/Wk	Credit
Mathematics 1	6	12
Science 1	6	12
Surveying 1	5	10
Technical Drawing 1	4	8
English	5	10
Computing 1	4	8
<i>Total</i>	<u>30 hrs</u>	<u>60 credits</u>
Stage TWO	Hrs/Wk	Credit
Mathematics 2	4	8
Science 2	4	8
Surveying 2	4	8
Hydraulics & Hydrology	4	8
Materials 1	4	8
Computing 2	2	4
Const. & Drafting Techniques 1	6	12
<i>Total</i>	<u>30hrs</u>	<u>60 credits</u>
Stage THREE	Hrs/Wk	Credit
Structures 1	4	8
Geology and Soil Mechanics	6	12
Management 1	4	8
Water Supply and Sewerage	4	8
Materials 2	4	8
Optional subjects:	8	16
* <i>Construction 2</i>		
* <i>Drafting Techniques 2</i>		
* <i>Roads 1</i>		
<i>Total</i>	<u>30hrs</u>	<u>60 credits</u>
Stage FOUR	Hrs/Wk	Credit
Structures 2	4	8
Engineering Mathematics	4	8

Management 2	4	8
Public Health Engineering	6	12
Technical Communication	4	8
Optional subjects:	8	16
* Construction 3		
* Drafting Techniques 3		
* Roads 2		
	Total	30 hrs
		60 credits

ENTRY REQUIREMENTS:

The minimum entry requirements is Grade 10 certificate with Credit grades in English, Mathematics and Science and have twenty four months industrial experience in the field of Civil Engineering or related areas and have a PETT or Trade Certificate in the Building and allied trade areas.

Or

Grade 12 Certificate with Credit grades in Maths A and Physics, C grade in English and other Science subjects and or have twelve months industrial experience in the field of Civil Engineering or related areas.

COURSE DURATION:

The course consists of four stages of twenty weeks full time attendance at the institution over three to four year successive years.

CERTIFICATION:

On successful completion of stage three in Civil Engineering Diploma Course students will be awarded a '**Certificate of Higher Technical Education in Civil Engineering**' and on successful completion of the fourth stage, students will be awarded a '**Diploma in Civil Engineering**'

CIVIL ENGINEERING

Involvement in designing, planning, construction, investigation or maintenance of Civil Engineering works is one of the most challenging and fulfilling occupations.

The term Civil Engineering covers a wide range of activities including investigation and evaluation, design, construction and maintenance of roads, bridges, airfields, wharves and harbours, water supplies, sewerage systems, drainage systems and even buildings. All of these have to be considerate of the environment.

The work is community-centred, varied and highly valued by the populace. It may be located in the largest city, in the remotest parts of the country or anywhere in between. Job satisfaction is high and achievements are tangible and rewarding.

The Civil Engineering industry is one of the largest industries in the country. Prospects are excellent for intelligent young men and women with a good understanding of technical, administrative and practical aspects of Civil Engineering.

Civil Engineering Technicians are middle management and drafting personnel who assist the Professional Engineers in all areas of their investigation, design, planning, construction and maintenance work.

On the construction site they are leaders responsible for the overall efficient and safe operation of construction work.

A BRIEF HISTORY OF THE FIRST POLYTECHNIC INSTITUTE IN PAPUA NEW GUINEA

THE National Polytechnic Institute of Papua New Guinea (*NPIPNG* or *Polytec PNG* for short) was officially launched on 2nd December 2009 with the Governor General, Sir Paulias Matane, making the official declaration and unveiling of the commemoration plaque.

_____ The National Polytechnic Institute was legally established in 2008 by the National Education Board acting under its authority as provided by Education Act 1983. On August 2008 a fact-finding team of five was sent to New Zealand to study the organizational structure set up, operation and management, and academic programs of selected polytechnics and institutes of technology. The team consists of acting TVET assistant secretary Mr. Jayasundra J. Banda, as team leader, the late principal—Mr. Mathew Piruruho, deputy principal—Mr. Lawrence Parry, and two department heads—Mr. Joselito Marcos and Mrs. Rosa Manua,

_____ Upon its return the team presented their findings and recommendations in a comprehensive report to the governing council. The report was well received by the governing council that created the Polytechnic Committee. The committee was tasked, in 2009, to carry out year-long activities—ranging from formulation of new vision and mission statements, strategic and management plans, policies and procedures on student affairs, governance and management, finance, and human resource development to academic matters among others—culminating into the official launching of the first polytechnic institute on the day before the 55th and last graduation rite of the former Lae Technical College.

_____ The National Department of Education established the National Polytechnic Institute as the first of four polytechnics envisioned to be created in each of the four regions of the country. The conversion from being a technical and a business college to a polytechnic institute was realized through the initiative of Technical Vocational Education and Training division, and was spearheaded by the college's governing council and administration together with its six academic departments.

_____ The former Lae Technical College was established in 1953 at the location where Busu High School is presently situated. In 1954, it was relocated to its present site with initially one administration block, two workshop units, one dining hall, and one toilet block.

_____ Various changes and improvements had taken place in the school in terms of infrastructure, academic programs, and personnel. Like any organizations, the college encountered a number of difficulties and problems but with the able assistance of the governing council, school authorities, stakeholders and the community, it has survived all the odds.

_____ With strong commitment from and undying faith of all stakeholders, it is envisioned that the institute will produce useful citizens equipped with life-long skills and knowledge that they can use in their quest for personal success and contribute to the progress and prosperity of this nation.

MISSION STATEMENT

WE are a government educational institution committed to develop individuals in various life skills through quality and relevant educational programs that meet business, industry and community needs for sustainable national progress.

VISION STATEMENT

WE are a prime institution for growth, excellence and prosperity through quality education and training.