

Education in Brunei Darussalam 1993

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EDUCATION IN
BRUNEI DARUSSALAM

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INTRODUCTION

Education in Brunei Darussalam is universal but not compulsory.

Education is free to all citizens of Brunei Darussalam from the age of five years to that of tertiary education for those who are eligible.

Government Schools in Brunei Darussalam are administered by two Ministers - the Ministry of Education and the Ministry of Religious Affairs.

With a population of only 256,500 (1990) Brunei Darussalam still lacks skilled manpower for its development plans. In order to meet skilled manpower requirements, various tertiary institutions have been established. These include Universiti Brunei Darussalam (UBD), Institut Teknologi Brunei (ITB), Sultan Saiful Rijal Technical Collage, Jefri Bolkiah Collage of Engineering, Sinaut Agriculture Training Centre, Mechanical Training Centre and Pengiran Anak Puteri Rashidah Sa'adatul Bolkiah Collage of Nursing. In addition, two new vocational schools are in the process of being built and a third is at the planning stage.

Education and the pursuit of excellence is something that Brunei Darussalam is very aware of and consequently makes full use of assessment and accreditation methods to maintain standards at international levels.

BRUNEI DARUSSALAM IN BRIEF

Brunei Darussalam is a Malay Sultanate. The Head of State, His Majesty the Sultan and Yang Di-Pertuan of Brunei Darussalam, Sultan Haji Hassanal Bolkiah Mu'izzadin Waddaulah, is also Prime Minister and Minister of Defence and presides over the Cabinet.

Cabinet

The Sultan is assisted and advised by five councils - the Privy Council, the Council of Ministers (the Cabinet), the Council of Succession and Religious Council.

The Cabinet consists of the Prime Minister and eleven other Ministers. They are the Minister of Foreign Affairs, the Minister of Finance, the Minister of Home Affairs, the Minister of Education, the Minister of Industry and Primary Resources, the Minister of Religious Affairs, the Minister of Development, the Minister of Culture, Youth and Sports, the Minister of Health and the Minister of Communication.

Administratively, Brunei Darussalam is divided into four Districts, each headed by a District Officer, Three of the Districts also have Municipalities, each under the control of a Board with a chairman as the executive officer. A District consists of several 'Mukims' each headed by a 'Penghulu'. A 'Mukim' consists of several kampongs (villages) and each of these in turn is headed by a 'Ketua' elected by the people of the village.

Historical Sketch

Brunei Darussalam has a long history. Early Chinese sources indicate that envoys from China visited the country as early as 518 A.D.

Recent discoveries suggest that Islam could have reached Brunei as early as the 13th Century through merchants and travellers from the Middle East. By the 15th Century the country had become a powerful Islamic Sultanate.

At the zenith of its power in the 16th Century - and especially during the rule of Sultan Bolkiah - Brunei's political dominance extended to the whole of Borneo and beyond, including parts of the Philippines and the islands around Singapore.

Brunei's trade with other countries gradually expanded and by the early 1800s the increasingly powerful European nations, namely, the Portuguese, Spanish, English and Dutch, began to show an active interest in the area.

Internal strife and foreign pressure in the 19th century conspired to create political instability and by 1888 Brunei had become a British Protectorate.

Finally, with the loss of Limbang in 1890, Brunei dwindled in size to its present area of 2226 sq. miles (5,765 sq. km).

The first British Resident arrived in 1906. He was the representative of the British Government and was charged with the duty of advising the Sultan on all matters except those concerning native customs and religion.

With his arrival, a new form of Government, which included a State Council, was established. This form of Government was to last until 1959, when a new written Constitution was promulgated and Brunei consequently achieved internal Self-government. There was a break of 3 1/2 years in the period of British administration when Japanese forces occupied the country during the Second World War.

Negotiations regarding Brunei's constitutional future took place on several occasions after 1959 and culminated in the regaining of full independence on 1st January 1984.

Oil was discovered by Shell in 1929. It was not until the 1950s that oil production became a dominant factor in the economy. The discovery and development of offshore oil and gasfields greatly increased production and helped to make Brunei Darussalam an important oil producer in the region.

With increase revenues from oil and gas, efforts to expand and improve the existing infrastructure of the country were intensified during the reign of Almarhum Sultan Haji Omar Ali Saifuddien Sa'adul Khairi Waddien (1950-1967), and these efforts have been continued and further strengthened by the present Sultan, His Majesty Paduka Seri Baginda Sultan and Yang Di-Pertuan of Brunei Darussalam. Sultan Haji Hassanali Bolkiah Mu'izzaddin Wadaullah is the 29th Sultan in a dynasty which stretches back to the 15th Century. His Majesty became Sultan following the voluntary abdication of his father on 4th October, 1967.

Geography

Brunei Darussalam, covering an area of 2,226 sq. miles (5,769 sq. km) with a coastline of about 100 miles, is situated on the North-West Coast of the Island of Borneo, 287 miles (442 Kilometres)

north of the equator. It has a common border with Sarawak, one of the two eastern states of Malaysia.

Brunei Darussalam is divided into four districts, namely Brunei/Muara, Tutong, Seria/Belait and Temburong. The Brunei/Muara District covers an area of 220 sq. miles while Seria/Belait District, the centre of the oil and gas industry, covers an area of 1,052 sq. miles. The other main districts are Tutong which covers an area of 450 sq. miles and Temburong District which covers an area of 504 sq. miles.

The country has an equatorial climate with uniformly high temperatures, humidity and rainfall. The average temperature is 32 °C. There is little annual variation in temperature; however, November to January during the north-east monsoon are generally cooler months. The temperatures in coastal regions are moderated by sea breezes. Nevertheless sunshine ranges from 55% of the maximum daylight hours in coastal areas to 42% for inland areas.

Humidity averages 82% throughout the year. The highest rainfall, averaging 4000 millimetres per annum, occurs in Temburong District. In the other parts of the country, rainfall averages between 2450 to 2900 millimetres per annum. There is no distinct wet season there is a tendency for heavier rainfall from November to January. Much of the rain consists of sudden thundery showers.

The land surface is developed on bedrock of tertiary age, comprising sandstone, shale and clay. The terrain in the western part of the country is hilly lowland which rises in the hinterland to about one thousand feet. To the east, the wide coastal plain reaches up to a height of five thousand five hundred feet above sea level at Bukit Pagon in the Temburong District.

Forests, classified into five types, mangrove, heath, peat swamp, mixed dipterocarp, and montane cover about 1,676 sq. miles or 75% of Brunei's total inland area. State forest reserves constitute approximately 818 sq. miles or 37% of the land area.

Wildlife includes honey bears, deer, monkeys and a myriad of reptiles and birds.

Population

The latest estimate of Brunei Darussalam's population is 256,500 (1990). Malay is the largest racial group, totalling 165,700; followed by Chinese 43,500. Other indigenous groups total 17,974 and Europeans, Indians and other races 15,478. Roughly 46.1% of the people are under 20 years of age and 14% are of pre-school age. Natural increase in the population averages between 5,000 and 5,700

or (2.4% and 2.6%) annually. Infant mortality rate is 12.72/1,000 births, which is among the lowest in the world.

Racial composition is as follows:

Malayss & other natives	74%
Chinese	18.0%
Others	8.0%

Language

Malay is the official language of the state though English is also widely spoken, particularly in commerce, industry and education. Other languages spoken include Chinese, and a number of native languages.

Religion

Islam is the official religion, as stated in the Brunei Constitution of 1959, with His Majesty the Sultan and Yang Di-Pertuan as the head of Islam in Brunei Darussalam. The people in their everyday lives follow Islamic principles under the guidance of the Ministry of Religious Affairs. Religious education is compulsory for every muslim child. Religious programmes cover a wide range of activities in line with the government's aspiration to make Islam a way of life for the people. Other faiths practised by a small minority are, however, allowed to be practiced freely.

Capital

Bandar Seri Begawan, the largest population centre with about 56,300 people, is the capital of the State, located in the Brunei/Muara District.

Formerly known as Bandar Town, it was renamed Bandar Seri Begawan on 4th October, 1970 in honour of the former ruler Almarhum Sultan Haji Omar Ali Saifuddien Sa'adul Khairi Waddien, who, during his 17 years of benevolent rule, set in motion the modernisation of Brunei Darussalam.

Adjacent to Bandar Seri Begawan is the well-known Kampong Ayer (Water Village) which has been in existence for centuries. More than 30,000 people live there in houses huddled together and built on stilts.

The population of Kampong Ayer is self-sufficient in facilities, including electricity and piped water supplies, clinics and schools. Cottage industries such as cloth-weaving, silverware and brassware, crafting and boat making, practised for generations, continue to flourish.

The bulk of the people work with the Government and private sectors, while many of the remainder have businesses of their own or take up fishing as their means of livelihood. Most of them have cars which they garage on the mainland and they commute to and from shore by motor boats, the main means of transportation for most water village residents.

Economy

Economically, Brunei Darussalam is dependent on the production of crude oil and natural gas. Brunei Darussalam is the third largest producer of oil in South-East Asia after Indonesia and Malaysia. Under Five-Year National Development Plans, 1987-1991 the Government has taken measures to diversify the economy by encouraging development in other fields. Oil and gas sales are estimated to provide 93% of Brunei Darussalam's total export earnings and the industry accounted for 80% of Brunei Darussalam's Gross Domestic Production in 1985.

Imports comprise such items as vehicles, machinery, industrial commodities, food and tobacco. Exports comprise crude petroleum, liquefied gas, "jelutung", sawn wood and pepper.

The population of Brunei Darussalam consumes over 20,000 tons of rice annually, most of which is imported at present. Part-time farming is popular and the Government is taking positive steps to improve agriculture and reduce the country's dependence on imported food. Priority is being given to the diversification of the economy through the development of agriculture and industry.

NATIONAL EDUCATION POLICY

The Education Policy of Brunei Darussalam aims to create the most effective system of education for the country. Education is an on-going endeavour which seeks to develop the all-around potential of the individual, in order to bring into being an educated and devout, as well as dynamic, disciplined and responsible people. Their virtues should be complementary with the needs of the State and founded on spiritual values which are noble in the sight of Allah. The policy forms starting-point which is oriented towards the specific character of Brunei Darussalam with emphasis on faith and obedience to Allah, priority for the Malay Language and loyalty to Monarch and State.

The National education policy is outlined as follows:-

1. To promote and sustain an educational system for Negara Brunei Darussalam in which the Malay Language will continue to play a leading role while the English Language is not neglected.
2. To provide education in the Islamic religion, while ensuring that Islamic values and Islamic way of life are integrated in the education system by means of an appropriate curriculum.
3. To provide at least 12 years of education for every Bruneian Child, namely 7 years in Primary (including pre-school); 3 in Lower Secondary and 2 years in Upper Secondary or Vocational School.
4. To provide a common curriculum and common public examinations of uniform type for all schools in the country.
5. To provide full opportunities for all children in Negara Brunei Darussalam to play useful role in the development of the country, in order that the needs of the country may be fulfilled through the involvement of the people themselves.
6. To offer higher education to those who are capable and qualified according to the changing needs of the country.
7. To form by all these means a national identity as a foundation for the inculcation of loyalty to the Monarch and Negara Brunei Darussalam, while at the same time building into the education system to qualify of efficiency and flexibility in order to fulfil the development needs of the country.

EDUCATION AIMS

The present education system has the following aims:-

1. To foster the all-round development of each individual from the physical, mental and spiritual point of view in terms of aesthetic disposition in order to make him or her into a Brunei citizen who will uphold the aspiration of the State.
2. To make each individual fluent in Malay and devoted to the interests of the Malay Language as the official language - while not neglecting English, in which proficiency is also essential.
3. To inculcate the teaching of Islam so that each individual will honour and be faithful to the Islamic religion and live according to its tenets.
4. To cultivate in each individual a sense of loyalty to the Monarch, the State and the Law and an awareness of responsibility as a citizen as well as the obligation to act upon that responsibility.
5. To cultivate in each individual the values and cultural norms of Brunei Society, centred on the principle of a Malay Islamic Monarchy.
6. To instil a love of peace, harmony and mutual help and unity among the citizens and residents of the country.
7. To mould in each individual the desire for progress; confidence in one's own ability; creativity; innovativeness; and sensitivity to contemporary change in the interests of adaptation to the demands of the age, though consistent with the cultural values, ethics and goals of the State.
8. To speed up development of manpower resources which are capable, rational and responsible, so that people can improve their standard of life and make a contribution to the development of the country.

MINISTRY OF EDUCATION

Formation

Concurrently with the resumption of full independence by Brunei Darussalam in January 1984, the Ministry of Education and Health was formed in order to fulfil (and extend) the functions of two former Departments - the Department of Education and the Department of Medical and Health. However, in October 1986 a new Ministry of Health was formed, leaving the Ministry of Education as a separate entity.

Administrative Structure

The Ministry of Education is headed by a Minister of Education who is assisted by a Deputy Minister and a Permanent Secretary. The Permanent Secretary is the administrative head of the Ministry and concurrently he is also the Director of Education and has the responsibility of looking into professional matters.

Since its formation, the Ministry of Education has both extended and enhanced its role as purveyor of education at all levels, so that standards of education have steadily been rising and the curriculum has undergone change and expansion to meet changing national needs.

There are six Departments in the Ministry of Education, each of which is headed by a Director. The six Departments were formed as a means of separating (yet co-ordinating) the various functions of the Ministry as shown in Chart 1. The Departments are as follows:-

The Department of Schools

The Department of Planning, Development and Research

The Department of Administration and Services

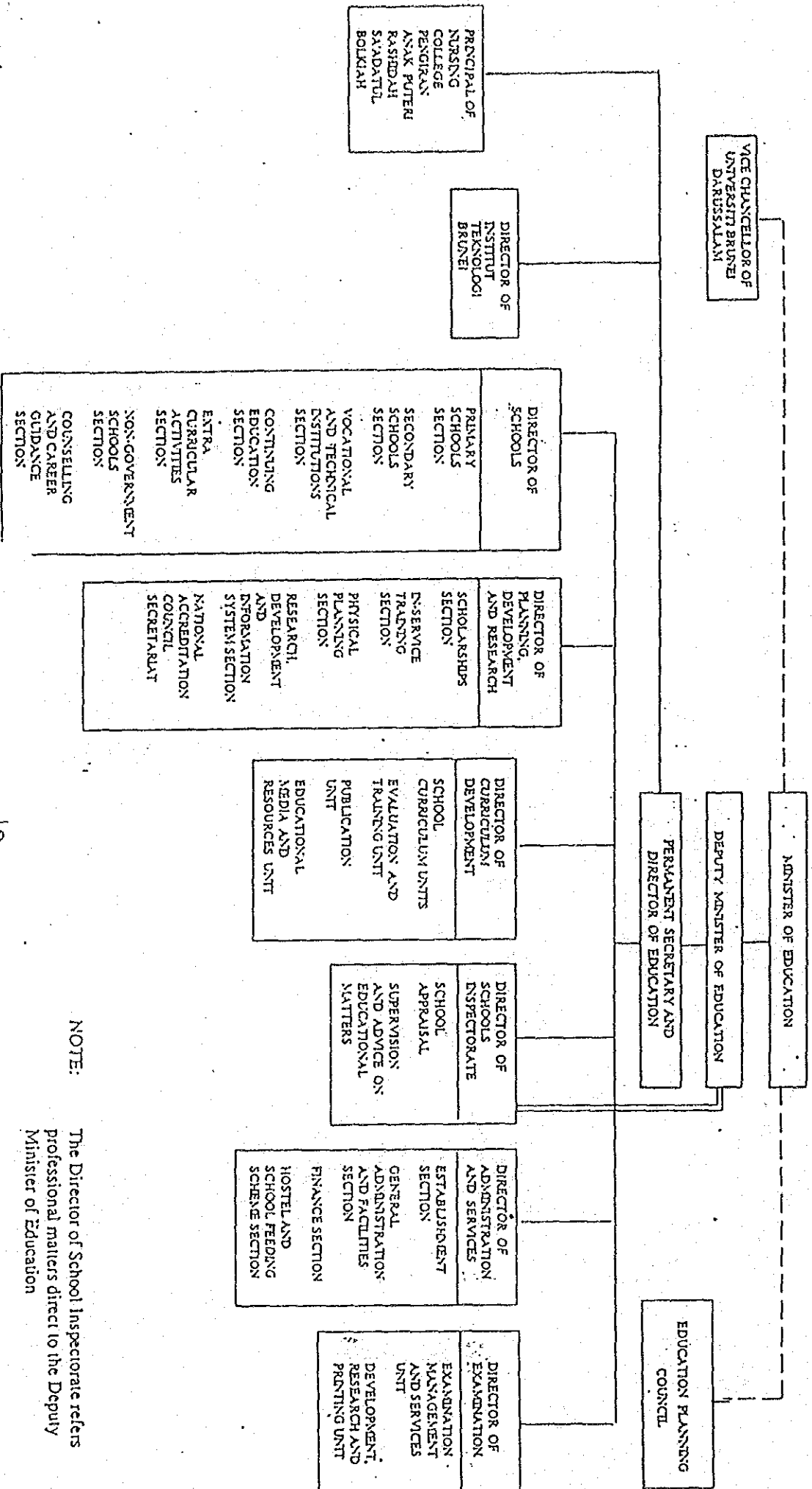
The Department of Schools Inspectorate

The Department of Curriculum Development

The Department of Examinations

ORGANISATIONAL STRUCTURE OF THE MINISTRY OF EDUCATION

CHART 1



NOTE: The Director of School Inspectorate refers professional matters direct to the Deputy Minister of Education

THE EDUCATIONAL SYSTEM

THE EDUCATION SYSTEM

The education system in Brunei Darussalam comprises government Schools/Colleges and non-government schools. The former are administered by the Ministry of Education. The latter are administered by other private bodies, but are also under the supervision of the Ministry of Education. The only educational institutions not under the supervision of the Ministry of Education are the Religious and Arabic schools, the Agricultural Training Centre at Sinaut and the Brunei Arts and Handicraft Training Centre in the capital.

All children entering the Government School system at the age of five, stay at the pre-school level for one year before proceeding to the first year of the primary school. They will stay at primary level for six years. The primary level consists of lower primary (Primary I to Primary III) and upper primary (Primary IV to Primary VI). A standardized test is sat at the end of the 3rd year of primary school. At the end of the primary level (Primary VI) a public examination, the Primary Certificate of Examination, is sat before pupils proceed to the secondary level.

The Secondary education lasts seven years - three years in lower secondary (Forms I - III), two or three years, for those who require a three year 'O' level course, in upper secondary (Forms IV - V), and another two years in higher secondary or pre-university.

There are three examinations taken at these levels as follows:

- i) The Brunei Junior Certificate of Education is usually sat at the end of the third year,
- ii) The Brunei Cambridge Certificate of Education (Ordinary Level) is sat at the end of the fifth year or sixth year for those who will have done a three year 'O' level course.
- iii) The General Certificate of Education (Advanced Level) is usually sat at the end of the seventh year (Upper Six).

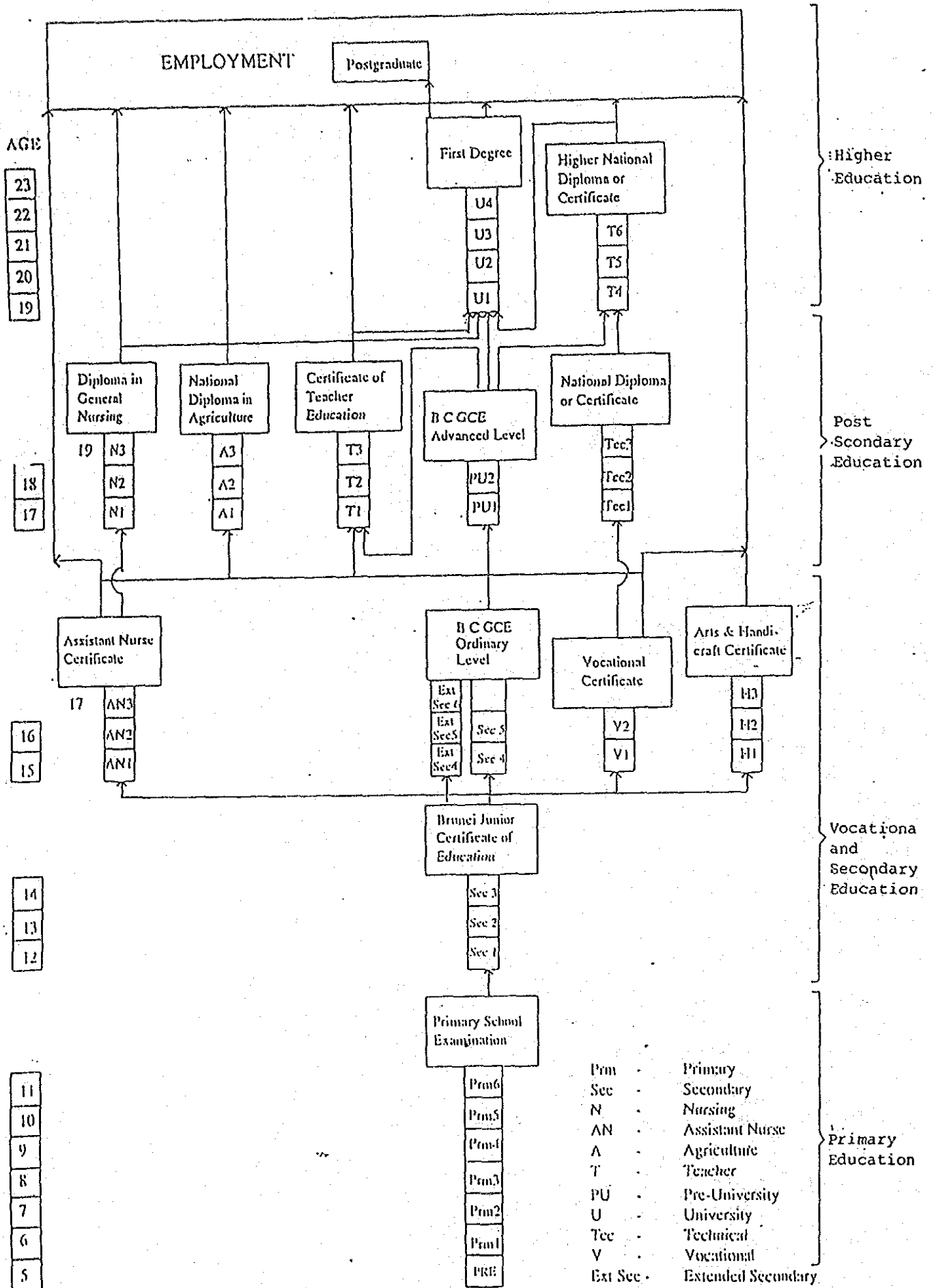
After completing their sixth form education, those with adequate and relevant Advanced Level passes can proceed to higher education either locally or abroad.

Some children in private school enter pre-school at age four and undergo schooling for two years before proceeding to primary education. The duration of each level of schooling is the same for the Government school system. Children from Non-Government Schools can join a Government Secondary School after completing their primary education subjects with satisfactory results.

All children in this country, whether in Government or Non-Government Schools, sit the same public examinations. The school year for all schools is divided into three terms with a total of 302 school days. The longest break is during the Muslim fasting month of Ramadhan. Schools operate 5 days a week with Fridays and Sundays off.

Education is provided free for citizens who attend government schools, Tuition, textbooks (on loans), transport and hostel accommodation for those students living eight kilometer away from school where necessary.

STRUCTURE OF THE EDUCATION SYSTEM OF BRUNEI DARUSSALAM



(1) PRIMARY EDUCATION

The System of Primary Education is divided into Pre School, Lower Primary and Upper Primary.

Pre School

Government Schools provide one year of pre-school education, while the private and mission schools, which run either kindergarten or nurseries, provide one or two years of pre-school education depending on the age of the children on admission.

On entering government pre-school classes children should not be less than five years old by 1st. of January. Age range varies considerably in private and mission schools from 3½ to five years old.

The Aims of Pre-School Education are as follows:

- i) To promote the development of character, ability, interests and physical skills.
- ii) To provide general education for mental, physical, emotional and social development.
- iii) To provide basic education in the 'Three Rs' (Reading, Writing and Arithmetic).
- iv) To provide spiritual and moral education

PRE-SCHOOL STATISTICS

Year	Number of Schools	Number of Children	Number of Teachers
1987	117	3,711	211
1988	117	3,973	218
1989	117	3,820	213
1990	117	3,931	211
1991	117	3,993	226

LOWER PRIMARY

Primary education is of six years duration. In the first and third years, the medium of instruction is Malay. This is then followed by another three years of bilingual instruction in English and Malay. Pupils sit a standardised test at the end of the third year of Lower Primary Education followed by a public examination, the Primary Certificate of Education (PCE), at the end of the sixth year.

The aims of education at Lower Primary Level (Primary I-III) are as follow:

- i) To emphasize development of creativity and basic skills in the 'Three Rs' (Reading, Writing and Arithmetic).
- ii) To reinforce these skills through the provision of learning situations such as will enable pupils to practise these skills.
- iii) To establish sound moral and spiritual principles.
- iv) To provide a preparation for formal education.
- v) To strongly emphasize the teaching of Jawi starting from Primary I.

PRIMARY SCHOOL STATISTIC

Year	Number of Schools	Number of Pupils	Number of Teachers
1987	117	27,847	2,067
1988	117	29,495	2,192
1989	117	30,194	2,196
1990	117	31,074	2,202
1991	117	31,684	2,224

(2) SECONDARY EDUCATION

Secondary education comprises 3 year of lower secondary, 2 years of upper secondary and another 2 years of pre-university (Sixth Form). The Brunei Junior Certificate of Education is in the third year of secondary education. The Brunei Cambridge of Education, Ordinary Level, is normally sat in the fifth year, whilst Advanced Level is sat int the seventh year.

At the end of the third year, students sit for the Brunei Junior Certificate of Education. At this stage students have these options:

- a) To pursue two/three years upper secondary education culminating in the Brunei Cambridge General Certificate of Education (GCE 'O' Level) Examination or,
- b) To pursue vocational education in a Technical/Engineering College offering one or two year building and engineering craft courses or other vocational training institutions or,
- c) To take up employment. Those with adequate and relevant 'O' level results can proceed to do a further two year course leading to the Brunei Cambridge Advanced Level Certificate Examination (GCE 'A' Level) and after that to the local university or universities abroad and other tertiary institutions.

Others may undertake training in the Faculty of Education (Universiti Brunei Darussalam), the Institute of Technology, the Nursing College, and the Agricultural Training Centre.

SECONDARY SCHOOL STATISTICS

Year	Number of Schools	Number of pupils	Number of Teachers
1982(i)	13	14,890	773
1983(ii)	18	15,931	1,263
1984	18	15,497	1,320
1985	16	14,813	1,278
1986	19	15,332	1,370
1987,,	16	13,681	1,271
1988	16	14,254	1,224
1989	16	15,518	1,377
1990	18	18,450	1,504
1991	18	19,896	1,583

(3) CONTINUING EDUCATION

Formerly known as Adult Education, this Section carries the responsibility of organising courses for working adults and training out of School youths. Continuing education was introduced initially with the aim of eradicating illiteracy, but the emphasis has since shifted towards improvement of general education, the acquisition of technical skills and programmes for the enrichment of leisure activities. It is open to all residents of Brunei at a minimal charge.

Centres have been set up throughout the country by using the facilities available in government schools and the premises which are designed primarily for public activities are also used for conducting classes. Classes are conducted mainly in the evenings. School teachers who work full-time in the day are employed on a part-time basis to conduct the adult classes. Most main Continuing Education Centres now offer courses of academic studies up to G.C.E.

- 1) Basic Literary Courses.
- 2) Secondary Academic Courses.
- 3) Home Economics.
- 4) Commercial Studies.
- 5) City and Guilds Technical English and Technical Subjects.
- 6) Foreign Languages.
- 7) Education for the Handicapped.
- 8) Education for the Prison Department.

Continuing religious education has also been actively organised. The main objective is to promote a better understanding of the teachings of Islam and to improve the ability to read the Quran. Classes are conducted at various venues such as mosques, suraus, schools, homes and offices.

(4) NON-GOVERNMENT SCHOOL

The non-Government Schools Section is responsible for all matters concerning Non-Government School.

At present there are 49 Non-Government Schools registered with the Ministry Of Education consisting of seven Mission schools, eight Chinese schools and thirty four private schools.

The Study Permit Section

The Study Permit Section is under the administration of the Non-Government Schools Unit. It is established specially for obtaining information concerning foreign students who wish to study in Brunei Darussalam Schools/College.

The number of foreign students who have already obtained their study passes is 9,600 (1991).

The total number of schools and pupils in Non-Government Schools is shown in the following table:

NGS. Table I (a)

	Year	Number of Schools	Number of pupils
Pre-School	1986	32	3,930
	1987	32	3,542
	1988	40	2,148
	1989	44	6,848
	1990	30	3,963
	1991	30	3,913

NGS. Table I (b)

	Year	Number of Schools	Number of Pupils
Primary (I-VI)	1982	23	9,512
	1983	23	10,311
	1984	25	10,738
	1985	25	10,846
	1986	26	9,521
	1987	26	13,281
	1988	26	9,061
	1989	27	13,501
	1990	28	12,041
	1991	24	13,016

NGS. Table I (c)

	Year	Number of Schools	Number of Pupils
Secondary (I-VI)	1982	10	2,808
	1983	10	2,923
	1984	10	3,068
	1985	10	3,368
	1986	10	3,329
	1987	10	2,464
	1988	10	2,782
	1989	10	3,213
	1990	10	2,632
	1991	10	2,982

SCHOOL CURRICULUM

SCHOOL CURRICULUM

To ensure the high quality and standardization of education, the Ministry of Education lays down guidelines for pre-school, primary and secondary curriculum. The tables below show the standard number of yearly teaching hours for each subject at lower and upper primary and lower and upper secondary school. There is no standard number of teaching hours for pre-school education.

(1) PRE-SCHOOL EDUCATION

Table 1

SUBJECTS	WEEKLY TIME ALLOCATION	LANGUAGE MEDIUM
<p>Pre-School education comprises: Language, Numbers, Courteous Basic Islamic Religion, Self discipline, Singing and Development of talent. These basics are taught through an integrated approach, using examples from the children's own environment. (The teaching of the content of one subject is not separated from that of another). Informal teaching methods are used throughout.</p>	<p>There is no strict division of the timetable into subjects since an integrated approach, which is largely activity-based, is used.</p>	<p>All teaching is in the medium of the Malay Language.</p>

(2) LOWER PRIMARY (Primary I - III)

The table shows the subjects, their time all allocation and the medium of instruction.

Table 2

NO.	SUBJECT	LANGUAGE MEDIUM	PERIODS PER WEEK (1 period is 30 mins)
1.	Malay Language (the study of Jawi begins from the third term of Primary I)	Malay	10
2.	English Language	English	10
3.	Mathematics	Malay	12
4.	General Studies	Malay	4
5.	Islamic Religious Knowledge	Malay	3
6.	Physical Training	Malay	2
7.	Art and Handicraft	Malay	2
8.	Civics (Singing, Recreational, Activities, The Traditional Customs and Way of Life of Brunei Darussalam)	Malay	2

* Half an hour each morning is devoted to early morning activities such as gardening and cleaning the school, before the commencement of normal lessons.

UPPER PRIMARY (Primary IV - VI)

The table below shows the subjects studies at Upper Primary level, their time allocation and the medium of instruction:

Table 3

NO.	SUBJECT	LANGUAGE MEDIUM	PERIODS PER WEEK (1 period is 30 mins)
1.	Malay Language	Malay	10
2.	English Language	English	10
3.	Mathematics	English	10
4.	Science (including Health Science)	English	3
5.	History	English	2
6.	Geography	English	2
7.	Islamic Religious Studies	Malay	3
8.	Physical Education	Malay	2
9.	Art and Handicraft	Malay	2
10.	Civics (Singing and Recreational Activities based upon the traditional way of life of the people of Brunei Darussalam	Malay	1

+ Half an hour each morning is devoted to early morning activities such as gardening and cleaning the school before the commencement of normal lessons.

(3) LOWER SECONDARY (Form I - III)

1. Compulsory and Examinable Subjects.

Table 4 (a)

NO.	SUBJECT	LANGUAGE MEDIUM	PERIODS PER WEEK (1 period is 35 minutes)
1.	Malay Language	Malay	5
2.	English Language	English	8
3.	Mathematics	English	6
4.	Integrated Science	English	6
5.	History	English	3
6.	Geography	English	4
7.	Islamic Religious Studies	Malay	3

2. Optional and Examinable Subjects.
(Only one subject to be chosen from the following list).

Table 4 (b)

NO.	SUBJECT	LANGUAGE MEDIUM	PERIODS PER WEEK (1 period is 35 minutes)
1.	Agricultural Science	English	3
2.	* Home Science	English	3
3.	Commercial Studies	English	3
4.	** Third Language (Bahasa Ketiga)		3
5.	Woodwork	English	3
6.	Metalwork	English	3
7.	Art & Craft	Malay	3
8.	** Music	Malay/English	3

* Home Science will replace Needlework.

** Subject to the availability of teaching staff and response from students.

3. Non-Examinable Compulsory Subject

Table 4 (c)

SUBJECT	LANGUAGE MEDIUM	PERIOD PER WEEK
Physical Education	Malay	2

Total number of periods for all subjects per week at this level is 40.

UPPER SECONDARY (FORM IV - V)

1. Compulsory and Examinable Subjects.

A. Compulsory subjects for all students.

Table US (a)

NO.	SUBJECT	LANGUAGE MEDIUM	PERIODS PER WEEK (1 period is 35 minutes)
1.	Malay Language	Malay	4 - 6
2.	English Language	English	6 - 8
3.	Mathematics	English	6
4.	Science		
5.	One to be selected from the following: - Agricultural Science - Integrated Science - Combined Science - Human and Social Biology - Science - Biology - Chemistry - Physics	English English English English English English English English	5 - 7 5 - 7 5 - 7 5 - 7 5 - 7 5 - 6 5 - 6 5 - 6

* Students joining the Science Stream should choose one from these subjects.

Optional Subjects

1. Group I (For the Science Stream)

Students who are to take a combination of subjects from group I should select at least two subjects from list A. Students who are interested in subjects from list B are allowed to choose one subject only from the list.

LIST A Table US I (b)

NO.	SUBJECT	LANGUAGE MEDIUM	PERIODS PER WEEK (1 period is 35 minutes)
1.	Physics	English	5 - 6
2.	Chemistry	English	5 - 6
3.	Biology	English	5 - 6
4.	Additional Mathematics	English	4 - 6
5.	Geography	English	4 - 6
6.	Economics/Principles of Accounts	English	4 - 6

LIST B Table US I (c)

NO.	SUBJECT	LANGUAGE MEDIUM	PERIODS PER WEEK (1 period is 35 minutes)
1.	History	English	4 - 6
2.	English Literature	English	4 - 6
3.	Malay Literature	Malay	4 - 6
4.	Islamic Religious Studies	Malay	4 - 6
5.	Art & Craft	Malay	4 - 6
6.	Other Languages	Specific Language	4 - 6

2. Group II (for the Art Stream)

Students who are to take a combination of subjects from Group II should at least take two from the following list:

Table US I (d)

NO.	SUBJECT	LANGUAGE MEDIUM	PERIODS PER WEEK (1 period is 35 minutes)
1.	Geography	English	4 - 6
2.	English Literature	English	4 - 6
3.	History	English	4 - 6
4.	Economics	English	4 - 6
5.	Principles of Accounts	English	4 - 6
6.	Commerce/Commercial Studies	English	4 - 5
7.	Science/Intergrated Science/ Combined Science/Biology/ Human and Social Biology		
8.	Food and Nutrition	English	5 - 7
9.	Home Management	English	4 - 5
10.	Fashion and Fabrics	English	4 - 6
11.	Malay Literature/Art & Craft	Malay	4 - 6
12.	Islamic Religious Studies	Malay	4 - 5
13.	Other Languages	Specific Languages	

3. Group III (For the Technical & Vocational Stream)

Students who are to take a combination of subjects from Group III should at least take two optional subjects from list A. Students who are interested in taking subjects from list B are allowed to choose one subject only from the list.

LIST A Table US I (e)

NO.	SUBJECT	LANGUAGE MEDIUM	PERIODS PER WEEK (1 period is 35 minutes)
1.	Engineering Science/Physics	English	4 - 6
2.	Agricultural Science	English	4 - 5
3.	Food and Nutrition	English	4 - 6
4.	Woodwork/Metalwork/Metalwork Engineering/Craft, Design & Technology	English	4 - 6
5.	Electronics	English	4 - 6
6.	Geometrical & Mechanical Drawing/ Geometrical & Building Drawing	English	4 - 6
7.	Fashion and Fabrics	English	4 - 6
8.	Home Management	English	4 - 5

LIST B Table US I (f)

NO.	SUBJECT	LANGUAGE MEDIUM	PERIODS PER WEEK (1 period is 35 minutes)
1.	Geography	English	4 - 6
2.	Commercial Studies/Commerce	English	4 - 6
3.	Principles of Accounts	English	4 - 5
4.	Islamic Religious Studies	Malay	4 - 5
5.	Malay Literature	Malay	4 - 5
6.	Art & Craft	Malay	4 - 6

(4) SIXTH FORM

There are two colleges under the Ministry of Education which offer 'A' level subjects. They are the Duli Pengiran Muda Al-Muhtadee Billah College (MDPMAMB) and the Paduka Seri Begawan Sultan Science College (MSPSBS).

Most sixth Form students follow nominal two year courses in three subjects, leading to the externally-assessed Brunei Cambridge G.C.E. 'A' level examination in November of the second year. Students at MDPMAMB follow a timetable which consists of a daily 15 minute tutorial session, and five or six 55 minute classroom lessons for each subject. Those who study at MSPSBS attend 35 minute classroom lessons for each subject.

Below is a list of subjects offered for study at MDPMAMB.

MSPSBS only offers the Science subjects plus Mathematics, English Language and Geography at Sixth Form level.

NO.	SUBJECT	LANGUAGE MEDIUM	PERIODS PER WEEK (in hours) (1 period is 55 minutes)
1.	Accounting	English	6
2.	Art	English	6
3.	Bahasa Melayu	Malay	6
4.	Biology	English	6
5.	Chemistry	English	6
6.	Economics	English	5
7.	English Language	English	4
8.	English Literature	English	4
9.	General Paper	English	4
10.	Geography	English	6
11.	History	English	5
12.	Mathematics	English	6
13.	Further Mathematics	English	6
14.	Physics	English	6
15.	Public Affairs	English	6
16.	Syariah	Malay	5
17.	Usulussin	Malay	5
18.	Civics	Malay	5

(5) THE READING AND LANGUAGE
ACQUISITION (RELA) PROJECT

Aims:

The Reading and Language Acquisition (RELA) Project has 2 main aims.

1. To raise children's achievement in English in listening, speaking, reading and writing skills and;
2. To foster the children's interest in books.

The interest in English is to help the school children become more effectively bilingual in Brunei Darussalam.

Implementation

The Ministry of Education in Brunei Darussalam started planning for RELA in early 1988 and in 1989, it was available for all the Primary 1 classes in 20 pilot primary schools. In 1990 it was introduced to a further 20 schools and in 1991, another 30 schools joined RELA. This year, RELA is implemented in 156 Primary 1 classes, 86 Primary 2 classes and 61 Primary 3 classes in a total of 70 schools. The leaves 47 schools in the country where RELA is not yet implemented. Most of these are small rural schools. The plan is to expand to 10 more schools in 1992 and carry out piloting the extension of RELA principles to some upper primary classes in 12 of the 20 pilot schools.

Summary of the Eleventh Consultant Report on RELA project

The evaluation exercise showed that RELA implementation strategies did more than fulfill the stated aims. The strategy of localising RELA implementation produced many spin-off effects beneficial to the Bruneian education system. As a result of the RELA in-service teacher training programme, the primary schools can now take pride in the fact that up-to-date teaching techniques are being used in their classrooms by RELA trained teachers whose techniques should improve with practice. The Bruneian RELA teachers are now practised in a whole range of participatory training methods using brainstorming and discussion techniques.

The local RELA officers have acquired professional and administrative expertise to varying degrees in the various areas of project implementation:

- i) The development of workshop packages for teacher training (e.g. techniques in conducting training workshops, training videos, notes for teachers, etc).
- ii) The development of daily guidelines in the form of a manual to help teachers in using teaching techniques.
- iii) The selection of appropriate books to be used in classroom.
- iv) Advisory skills in the development supervision of teachers and,
- v) Some experience of testing involved in the evaluation of the project.

One feature that stands out from the feedback that is found not only happy RELA children but that the teachers were also generally satisfied with the project. They were especially happy with the workshops which were generally highly rated in both years. Many admitted they enjoyed using RELA teaching methods and almost every RELA teacher agreed with the statement that RELA should be adopted as part of the school curriculum.

Overall it can be said that the RELA project has successfully completed its second year of implementation.

RELA IMPLEMENTATION

RI/1

YEAR		NUMBER OF SCHOOLS BY DISTRICT				TOTAL
		BRUNEI/ MUARA	TUTONG	BELAIT	TEMBURONG	
1989		12	3	4	1	20
1990	Additional	14	3	2	1	20
	Cumulative	26	6	6	2	40
1991	Additional	17	7	1	5	30
	Cumulative	43	13	7	7	70
REMAINDER		13	20	8	6	47
PROPOSED	Additional	7	3	0	0	10

TECHNICAL
AND
VOCATIONAL EDUCATION
AND
TRAINING

TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

Introduction

The Government of Brunei Darussalam realizes that an educated work force, and more particularly, appropriately trained tradesmen and technicians in adequate numbers, is a necessary co-requisite of growth and development. National Development plans have, therefore, recognized the importance of technical and vocational education as a means of assisting in both current and future economic and social objectives.

Provision

Over the past 16 years, seven Government financed and controlled technical and vocational institutions have been established offering full-time and part-time courses and programs in a wide range of subjects to students with varying levels of educational attainment. In addition, two new vocational schools are in the process of being built and a third is at the planning stage.

The existing institutions are:

- The Jefri Bolkiah College of Engineering (MKIB) at Kuala Belait.
- The Brunei Arts and Handicrafts Training Centre (PLKDPT) at Bandar Seri Begawan.
- The Sinaut Agricultural Training Centre (SATC) at Kampong Sinaut.
- The Sultan Saiful Rijal Technical College (MTSSR) at Jalan Muara
- The Brunei Institute of Technology (ITB) at Jalan Muara.
- The Mechanical Training Centre (PLM) at Jalan Tungku Gadong; and
- The Pengiran Anak Puteri Rashidah Sa'adatul Bolkiah College of Nursing.
- Lambak Kanan Vocational School.
- Regional Centre For Vocational and Technical Education ASEAN.
(VOCTECH)

Organization

The Department of School has administrative authority for the day-to-day operation of MKJB, MTSSR, PLM, VOCTECH, ITB, LKVS and the Nursing College; the Ministry of Industry and Primary Resources, Department of Agriculture for SATC; and the Ministry of Culture, Youth and Sports, Museum Department for PLKDPT.

(1) THE JEFRI BOLKIAH COLLEGE OF ENGINEERING

The Jefri Bolkiah College of Engineering is located in Kuala Belait and was originally established in 1970 as an engineering craft trade school. Some years later it was designated the Jefri Bolkiah School of Engineering. The School continued to expand in both physical plant and academic courses offering over the ensuing years and in 1987 it was upgraded to a College of Engineering.

The College offers a comprehensive range of craft, technician and ad-hoc courses developed in response to demand from the public and private sectors of the Brunei Darussalam economy. In particular, the College operates closely with Brunei Shell Training Centre at Seria.

Courses are offered through seven major sections within the college organizational structure and these sections include; Air-Conditioning and Refrigeration; Plant Engineering; Automotive; Electrical; Welding and Fabrication; English and Mathematics and Science.

Technician level courses of 3 years duration are offered on a sandwich basis to the Business and Technician Education Council (BTEC) certification levels. These courses include; Mechanical and production Engineering; Welding and Fabrications; Electrical Engineering; and Plant Engineering. In addition, a three and one-half-year Diploma in Agriculture is offered in conjunction with the Sinaut Agricultural Training Centre, and a three year Marine Engineering course is offered in conjunction with the Marine Department, Ministry of Communications. The sandwich method of course delivery consists of alternate periods of instruction at the College and training with an employer on-the-job.

At the craft level, a locally developed Basic Engineering course is offered to students having attained the Brunei Junior Certificate of Education examination with specified passes in Mathematics, Science and English. Modular first year units emphasize basic engineering skills at the craft level and prepare students for the more specialized second year modules in Mechanical Fitting, Electrical Installation, Metal Mechining, Welding, and Refrigeration and Air-Conditioning. On successful completion of the second year modules students sit the appropriate City and Guilds of London (C&G) examinations.

(2) SULTAN SAIFUL RIJAL TECHNICAL COLLEGE

The Sultan Saiful Rijal Technical College is located on Jalan Muara and was established in 1985 as the result of a merger between the Brunei Technical Training Centre and the Sultan Saiful Rijal School of Building. Since 1985, growth in the College has been evident in all areas of operation. New courses have been added to meet new employment demands and existing courses are being constantly revised and extended to meet the continuous skill changes required by business and industry. The College offers a comprehensive range of craft, technician and ad-hoc courses through eight major departments which include; Electrical and Electronic Engineering; Business and Management; Mechanical Engineering; Building Construction; Science; Mathematics and Computers; Community Services; and General Communications.

All the present time, the majority of certificate level courses at craft, technician and professional levels available in the various departments are offered in collaboration with United Kingdom accrediting bodies which include the Business and Technician Education Council (BTEC); the City and Guilds of London Institute (C&GLI); the Royal Society of Arts (RSA); Primary and the London Chambers of Commerce Institute (LCCI) examinations.

(3) MECHANICAL TRAINING CENTRE

The Mechanical Training Centre is located in Jalan Tungku Gadong and was opened in 1986. The Centre was a gift to the Government of Brunei Darussalam from the Mitsubishi Corporation of Japan.

Purpose built facilities at the 40 hectare Centre site include an administrative block, heavy duty mechanical workshop, classrooms, work areas for the operation of heavy duty machinery and a canteen.

The Centre offers both full and part-time courses in the principles of operation, maintenance and repair of heavy construction machinery.

The full-time course is of two years duration. Part-time in service students from Government departments such as the Public Works Department attend the Centre on a block release basis for a period of 40 weeks.

Full-time students at the Centre spend at least one month on industrial attachment during the period of their training in order to gain hands-on experience in a production environment.

Applications to the Centre must have passed the Brunei Junior Certificate of Education Examination and pass the Centre qualifying test.

Direct entry is offered to in-service trainees on receiving approval from their government departments.

Courses the Centre are delivered by Japanese trained local instructors.

(4) THE BRUNEI DARUSSALAM TECHNICAL
EDUCATION AND EXAMINATIONS COUNCIL

In May 1991, the new Brunei Darussalam Technical Education and Examinations Council was established by the Ministry of Education.

The Council, under the Chairmanship of the Deputy Minister of Education, will allow for the development of a complete and integrated system of local awards in technical and vocational education which will be of benefit to the Country, to employers and the individual alike.

The Council will approve programmes, establish and assess standards of performance and award certificates and diplomas.

Over a phase-in period of three years beginning 1991, the awards of the Council will replace the substantial and diverse provision that now exists from overseas validating and awarding bodies.

The new system of Council awards will be recognized by industries and professional organizations, and the international standing of all awards will allow for student mobility and progression in higher education and the higher levels of professional qualifications.

(5) INSTITUT TEKNOLOGI BRUNEI (ITB)

Introduction

Institut Teknologi Brunei is presently geared to producing BTEC Higher National Diploma graduates. The courses are designed, organised and implemented by ITB but are validated by the Business and Technician Education Council (United Kingdom), HND graduates of ITB will normally be eligible for entry to the second year of a university level course.

The Institute has three well-established departments: the Business and Management Department, the Computing and Information Systems Department and the Electrical and Electronic Engineering Department. All the departments in the Institute offer Higher National Diploma (HND) courses.

The Business and Management Department also offers a higher National Certificate programme, and a part-time course for employees in both the public and private sectors. The Electrical and Electronic Engineering Department also offers courses for the first two years of the Bachelor in Engineering programme which is jointly conducted by the University of Glasgow and Universiti Brunei Darussalam.

Students attending the full-time HND programme will complete a six month supervised work experience programme in either a public or private sector organisation. Since being employed is a prerequisite for the HNC part-time programme, students attending this course will not be required to take part in any supervised work experience programme.

As part of the expansion programme and in line with the needs of the Bruneian community, Insitut Teknologi Brunei intends to offer Civil and Mechanical Engineering courses while the Department of Computing and Information Systems plans to introduce the HNC course. The above courses will be implemented in the not too distant future.

(6) THE SEAMEO REGIONAL CENTRE FOR VOCATIONAL AND TECHNICAL EDUCATION (VOCTECH)

Brunei Darussalam joined SEAMEO in 1986. Being the youngest member of SEAMEO and the only one without a SEAMEO Centre yet, Brunei Darussalam offered to be the host of the SEAMEO VOCTECH Regional Centre although its training requirements, compared to other Member Countries, are only 0.35%. This is a sign of its commitment to the Organisation.

The SEAMEO Council of Ministries has realised that the establishment of a SEAMEO Regional Centre for Vocational and Technical Education (VOCTECH) could pool together the expertise and resources from this region and contribute to meeting the needs of the Member Countries.

The VOCTECH Regional Centre will identify and help solve common problems within SEAMEO member countries in the field of Vocational and Technical Education. It will focus its activities on addressing national, regional and local challenges in developing the competencies required of labour forces to achieve and implement economic, industrial, business and labour market goals and strategies through vocational and technical education and training.

THE SEAMEO
REGIONAL CENTRE
FOR VOCATIONAL AND
TECHNICAL EDUCATION
(VOCTECH)

THE SEAMEO REGIONAL CENTRE FOR VOCATIONAL AND TECHNICAL
EDUCATION (VOCTECH)

(1) BACKGROUND INFORMATION : SEAMEO

The South East Asian Ministers of Education Organisation

The South East Asian Ministers of Education Organisation (SEAMEO) was established on 30 November 1965. It is a regional inter-governmental as well as an international organisation. It was established by agreement between the governments of Southeast Asian Countries whose respective Ministers/Secretary of Education signed for and on behalf of their corresponding governments the Charter of the Organisation.

Member Countries and Associate Members of the Organisation

Member Countries

Brunei Darussalam
Indonesia
National Government of
Cambodia
Laos
Malaysia
Philippines
Singapore
Thailand

Associate Members

Australia
Canada
France
Federal Republic of
Germany
New Zealand

Purpose of the Organisation.

The purpose of the Organisation is to promote regional cooperation among Southeast Asian nations in the areas of Education, Science and Culture in order to further respect for justice, the rule of law and the human rights and fundamental freedoms which are the birthrights of the peoples of the world.

Structure and Functions of the Organisation.

The Policy-making body of the Organisation is the Southeast Asian Ministers of Education Council (SEAMEC). It is composed of the Ministers of Education of the Member Countries. The Council meets regularly once a year to formulate policies for SEAMEO and to approve all SEAMEO programmes, budgets, and make decisions. The Council elects its own President and appoints any other key personnel involved in executing and implementing its policies, activities and programmes.

The executive arm of the Council is the Southeast Asia Ministers of Education Secretariat (SEAMES) which is based in Bangkok, Thailand. It is headed by a Director who is appointed by the Council and who is the chief administrative officer and legal representative of the Organisation. One of the main functions of SEAMES is to execute the instructions and decisions made by the Council.

SEAMEO Centres and Project.

SEAMEO's purposes have been translated into action with the establishment of 6 SEAMEO Regional Centres and 1 Project based in different Member Countries. Each of these centres/project is concerned with a programme area deemed necessary to human resource development. The centres and project are as follows:

1. SEAMEO Regional Centre for Tropical Biology.
(SEAMEO-BIOTROP)

Hosted by : The Government of Indonesia

Objective : To contribute to the economic development of the Southeast Asian region by identifying and solving critical biological problems the solution of which enhances regional development and by helping solve these problems through appropriately designed research/training programmes and holding of scientific meetings.

2. SEAMEO Regional Centre for Education Innovation and Technology.

(SEAMEO-INNOTECH)

Hosted by : The Government of the Philippines

Objective : To identify educational problems common to the region, and to assist SEAMEO Member Countries in the solution of these problems by encouraging innovation, developing model solutions, and exploring the utility of available educational technology wherever appropriate.

3. SEAMEO Regional Centre for Education in Science and Mathematics.
(SEAMEO-RECSAM)
Hosted by : The Government of Malaysia
Objective : To help improve the teaching of Science and Mathematics in Member Countries, in order to lay a firm foundation for meeting the scientific and technical manpower needs of Southeast Asian countries for national development.

4. SEAMEO Regional Centre for Graduate Study and Research in Agriculture.
(SEAMEO-SEARCA)
Hosted by : The Government of the Philippines
Objective : To provide the participating countries with high quality graduate study in agriculture; to promote, undertake, and coordinate research programmes related to the needs and problems of the region; to disseminate the findings of agricultural research and experimentation.

5. SEAMEO Regional English Language Centre.
(SEAMEO-RELC)
Hosted by : The Government of Singapore
Objective : To assist SEAMEO Member Countries in improving the teaching of English and other languages and to that end, to conduct high quality training courses, including courses leading to M.A. and Ph.D. degrees, undertake research and publications and other kindred activities related to the needs and problems of the region.

6. SEAMEO Regional Tropical Medicine and Public Health Project.
(SEAMEO-TROPMED)
Hosted by : Jointly sponsored by the Governments of Thailand, Malaysia, Philippines and Indonesia
Objective : To promote cooperation in education, training, and research in the fields of tropical medicine and public health for prevention, control, and eradication of tropical endemic and environmental diseases so as to improve the health and standards of living of the peoples of Southeast Asia.

7. SEAMEO Regional Project in Archaeology and Fine Arts.
(SEAMEO-SPAFA)

Hosted by : The Government of Thailand

Objective : To cultivate awareness and appreciation of the cultural heritage through collaboration in information dissemination and other relevant programmes of activities; to promote and help enrich archaeological and cultural activities in the region; to further professional competence in the fields of archaeology and fine arts through regional programmes and activities and through sharing of resources and experiences; and to advance mutual knowledge and understanding among the countries of Southeast Asia through regional programmes in archaeology and fine arts.

Funding of the Organisation's activities and programmes.

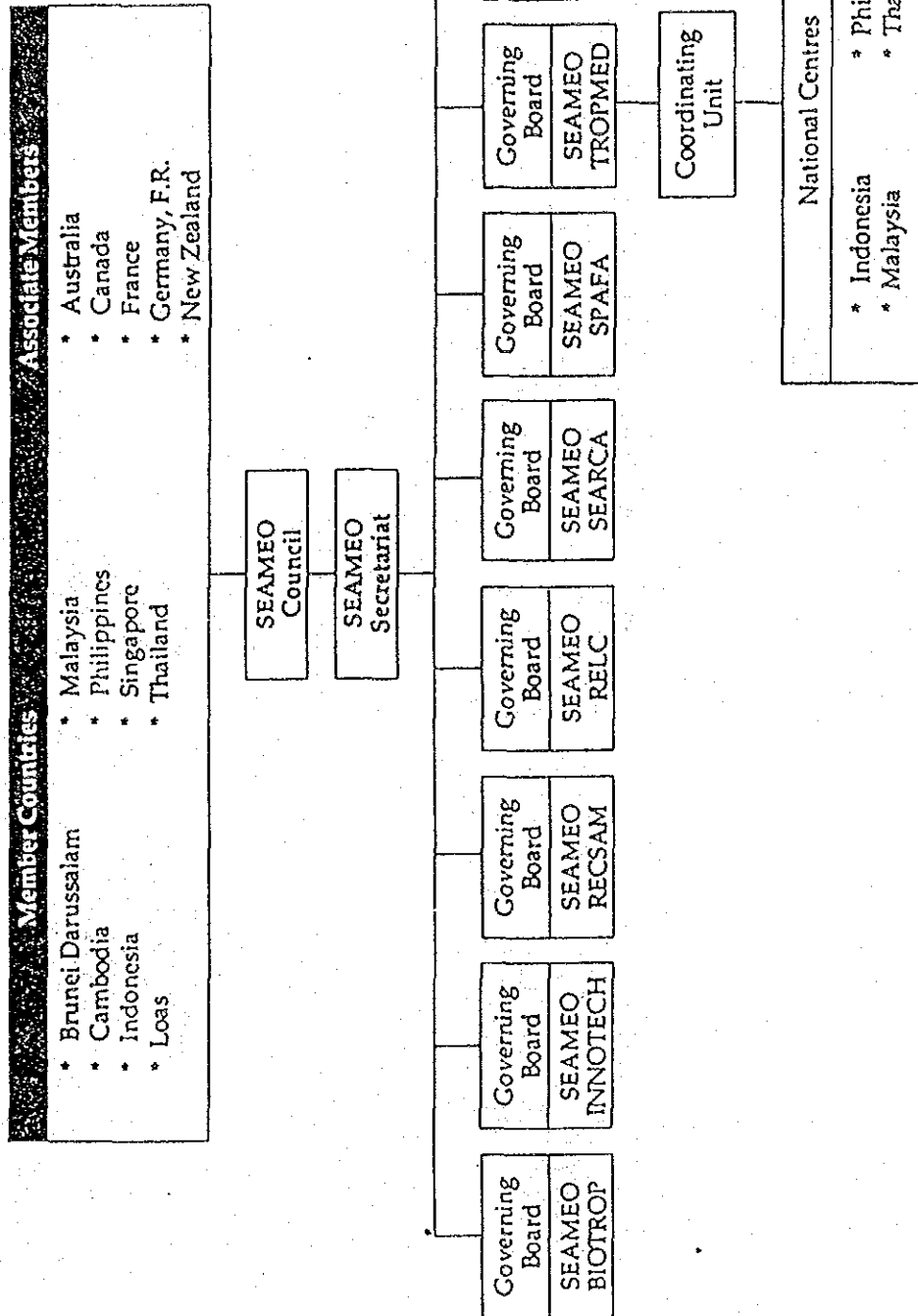
SEAMEO derives its funds from the following sources:

- a) Member Countries' Contributions.
- b) Associate Members' Contributions.
- c) Donor Governments and International Organisations.

These are regular and ad hoc contributions by the Governments of Member Countries and Associate Members and also from donor governments and governmental agencies and foundations as well as private foundations, corporations and individuals.

These funds provide for Training and Research Scholarships, Governing Board Meetings, Seminars and Conferences and Personnel Exchanges.

SEAMEO ORGANISATIONAL CHART



(2) Background History

The idea of establishing a SEAMEO Regional Centre for VOCTECH dates back to 1986. It was brought up by the SEAMES Director during his discussions with the French authorities as part of his fund-raising efforts. The French Government's representatives expressed interest in the establishment of such a centre.

In September 1987, the SEAMES Director made a courtesy call on the Minister of Education, Brunei Darussalam. The Minister expressed the Brunei Government's interest in the centre. His Excellency requested SEAMES to prepare a 'concept proposal' for consideration of the SEAMEO Council.

At the 10th meeting of the High Officials (HOM) in November 87, the concept proposal was presented by the secretariat for consideration. The proposal was also discussed at the 23rd SEAMEC Conference in Bali in February 1988, at the recommendation of the HOM.

The council resolved that:

1. an Experts Committee be set up to conduct a feasibility study on the proposal to establish a SEAMEO Regional Centre for Vocational and Technical Education and Training,
2. Experts Committee meetings be convened by SEAMES and
3. funds be allocated from SEAMES Reserve Fund to finance the activities of the Experts Committee.

Accordingly, SEAMES set up an Experts Committee comprising representatives from Member Countries, Associate Member and Donor countries, Staff of SEAMES and a consultant from Thailand.

The Committee met twice, once in Bangkok from 23 to 25 May 88 to organise the survey and analysis of needs and resources of SEAMEO countries and once in Chiangmai from 28 to 31 October 88 to finalise the feasibility study report for submission to the 11th High Officials Meeting. One of the recommendations mentioned in the report was for Brunei Darussalam to host the centre.

At the 24th SEAMEC Conference held in Malacca (Malaysia) the Council, acting on the recommendations of the Experts Committee, agreed to establish a SEAMEO Regional Centre for Vocational and Technical Education and Training (VOCTECH), and expressed appreciation to the Government of Brunei for offering to host the Centre. The decision was made with the understanding that Brunei Darussalam, with the cooperation of SEAMEO Secretariat, would seek funding support from other countries for the establishment and operation of the Centre.

(3) Definition of Vocational and Technical Education

In a comprehensive sense, vocational and technical education is an integral part of general education, the means of preparation for an occupation, and an aspect of life long learning.

Besides general education, vocational and technical education includes the study of technologies and related sciences, acquisition of practical skills, attitudes, understanding and knowledge related to occupations.

(4) Establishment of SEAMEO VOCTECH

Vocational-technical education and training is rated as a high priority area in all the SEAMEO Member Countries. This is because their national development plans call for greater modernisation in the 1990s. For this reason, the governments of Member Countries are establishing more vocational and technical institutions and improving the quality of training for their vocational and technical human resources. However, the demand for human resource development far exceeds the capacity of their national institutions. Constraints are mainly lack of qualified resource persons and lack of infrastructure for continuous staff development programmes.

The SEAMEO Council realises that the establishment of a SEAMEO Regional Centre for vocational and technical education could pool together the expertise and resources from this region and contribute to meeting the needs identified by the Member Countries. Therefore, at the 24th SEAMEC Conference held in Malacca, Malaysia, in January 1989, the Council made a resolution to establish such a centre.

In line with the common interests and needs of Member Countries, the Experts Committee who undertook the feasibility study on the setting up of VOCTECH Centre recommended that the VOCTECH should focus its activities and programmes on three main areas. These areas are :

Staff Development
Research and Development and
Management Information Systems

SEAMEO VOCTECH : Role Statement, Goals and Objectives

Based on the Feasibility Study Report and in line with the SEAMEO Strategic Planning for the 1990s, SEAMEO VOCTECH formulates its role statement, goals and objectives in support of the SEAMEO Mission.

(5) Role Statement

The VOCTECH Regional Centre will identify and help solve common problems within SEAMEO member countries in the field of Vocational and Technical Education. It will focus its activities on addressing national, regional and local challenges in developing the competencies required of labour forces to achieve and implement economic, industrial, business and labour market goals and strategies through vocational and technical education and training.

In playing its role, VOCTECH will carry out the following activities and functions both within and outside Brunei Darussalam:

- to act as a catalyst and innovator by
 - Conducting training courses for teachers, curriculum developers, evaluators and other personnel involved in planning, implementing and supervising, vocational and technical programmes.
 - Upgrading the skills of both vocational and technical administrators and trainers in Research and Development and in Management Information Systems.
 - Updating and encouraging the exchange of ideas and experiences through seminars/workshops/symposia on vocational and technical themes/problem areas.

- to act as clearing house by
 - Handling information services, in particular collecting and disseminating information related to vocational and technical education problems, developments, planning and implementation.

• to act as a resource centre by

- Providing consultative services in areas of vocational and technical requirements and problems.
- Undertaking research projects e.g. evaluation of vocational and technical programmes.
- Creating and developing new ideas/approaches in education and training for vocational and technical teachers and other relevant personnel.

(6) Goals

After an analysis of its external and internal environment, the VOCTECH Centre has identified 4 strategic issues which need focusing on. These issues are : Clientele, Programmes and Services, Management and Financial.

A. Target Clientele.

In order to guarantee the success in assisting Member Countries in identifying and helping solve common problems in vocational and technical education, we consider the identification and selection of the participants to the training programme as important. We will therefore strive to ensure that these participants are

- those who by their position and personal qualities are most likely to be agents of change and can have a multiplying effect on the development of institutions in member countries
- those whose specialised knowledge will be significantly enhanced by the training programme
- those who are sponsored by agencies willing to collaborate with the centre by providing VOCTECH Alumni with the opportunities to apply the knowledge and skills they have acquired
- those who can learn effectively in an English Language environment

Men and women will be both given equal opportunities.

B. Programmes and Services.

In order to contribute effectively to the development of human resources in Member Countries, it is the primary goal of VECTECH to provide relevant, effective and useful programmes for the improvement of their vocational and technical education. We will therefore ensure that the programmes and services provided are

- responsive to the common needs of Member Countries in training, research and information
- evaluated, prioritised and efficient
- not unnecessarily duplicating national programmes
- contributing to the strengthening of member countries' national institutions
- designed for participants who have potential in carrying out multiplier effect at their respective countries
- supported by the involvement of institutions, industries, business and other agencies in Member Countries
- recognised regionally and internationally by governments and private agencies.

C. Management.

To ensure that VECTECH can respond quickly and effectively to the changing needs of Member Countries and serve as a model for vocational and technical education and for other development efforts, it is our goal to develop and strengthen our management capabilities. We will therefore strive to

- communicate effectively with the relevant, national, regional and international communities in order to keep them informed of the regional issues in Human Resource Development.

- adopt a Strategic Planning Process as a continuous mechanism for improved VOCTECH performance.
- set objectives and evaluate the results continuously so as to make sure that VOCTECH resources are managed effectively and that the programmes and services meet the desired objectives and needs of our clientele.
- maintain an international profile and status.
- recruit professional and administrative staff of high calibre and maintain continuity and effectiveness while respecting an individual's career development by maintaining and upgrading the quality of centre staff.

D. Financial.

It is VOCTECH's goal to ensure that its resource fund will cover its expenses and to undertake fund-raising and income-generating activities consistent with SEAMEO's policies.

(7) Objectives

In support of its goals, VOCTECH sets itself the following objectives for the interim period of its operation, 1990-1993:

1. Identify and establish working relationships with all governmental jurisdictions responsible for human resource development through vocational and technical education in Member Countries of SEAMEO.
2. Identify and establish formal collaboration with at least one national institution in each of the Member Countries, in support of the training model of the Centre.
3. Identify and establish appropriate linkages with regional and international institutions and agencies engaged in vocational and technical education, as well as with other SEAMEO Centres.

4. Establish the criteria for the identification and selection of the SEAMEO-VOCTECH scholarship recipients.
5. Plan, implement and evaluate the training programme for 1990-1993.
6. Plan and produce publications of information materials, as required for the effective delivery of the Centre's programmes and services, and in support of SEAMEO as a whole.
7. Establish the core and short term staffing requirements, and hire the appropriate administrative and technical personnel for delivering the programmes on a high and professional level, consistent with the staffing policies of the Organisation.
8. Plan and acquire the appropriate physical resources for the effective delivery of the Centre's programmes.
9. Adopt the SEAMEO strategic management process as a mechanism for continuing improvement of the Centre's overall performance.
10. Develop the training plan, together with the plan for generating the revenue required for the continued, viable operation of the Centre beyond the interim period of 1990-1993.

(8) VOCTECH TRAINING MODEL

To show clearly how the VOCTECH Centre proposes to carry out its training activities, a training model has been developed (Fig.1). The Model shows the structure and dynamics of the regular training programme. The explanation of this Training Model is outlined below. The model is in line with the VOCTECH's mission, goals and objectives.

a. THE VOCTECH CENTRE

The Centre will both teach the skills of Training, Research and Development and MIS and actually Train, do Research and use MIS itself.

b. THE TRAINING PROGRAMME

The central feature of the Training Programme is an intended 'multiplier' effect. This means the Centre will train personnel, who, after the centre-based part of the training is completed, will go back to their respective countries and in turn will run training programmes based on what they learned at the Centre. The same process will repeat itself, hopefully, with the second-order trainees and so on.

The programme itself will comprise 2 phases. Phase I will consist of a 3-month period of in-house training at the VOCTECH Centre and Phase II will consist of field work lasting up to 12 months depending on the roles of the clientele.

During Phase I each of the participants will be allocated a computer system which they will use throughout the programme. The in-house programme will consist of courses, workshops, seminars, projects, practical and individual study sessions covering a wide range of vocational and technical education issues at various levels.

At the end of Phase I, the participants will be expected to produce a Learning Plan and a Training Plan, both of which will be implemented upon returning to their home countries. The implementation of these plans will constitute the field work or the 2nd phase of the training programme.

SEAMEO-VOCTECH EDUCATION AND TRAINING MODEL

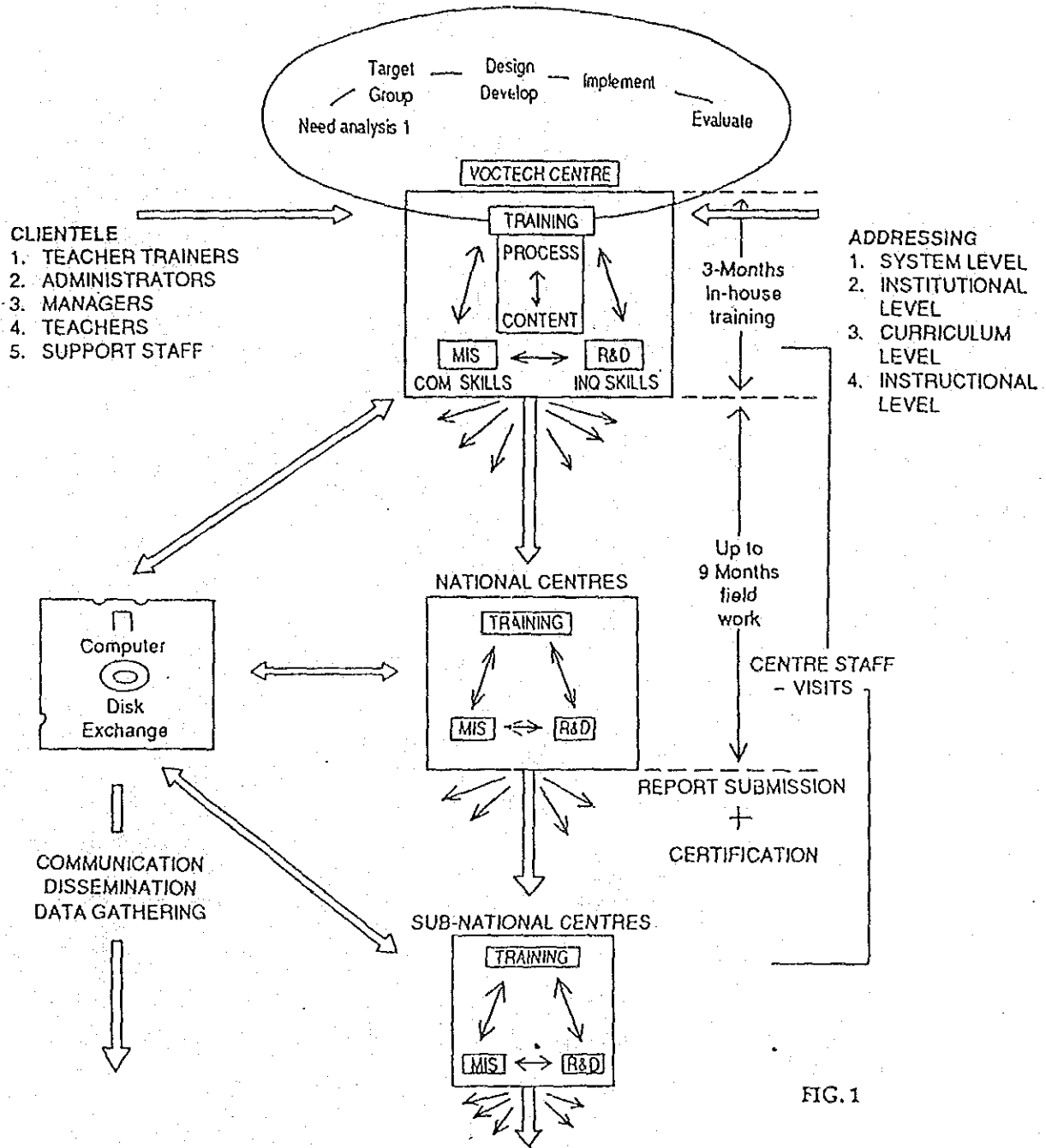


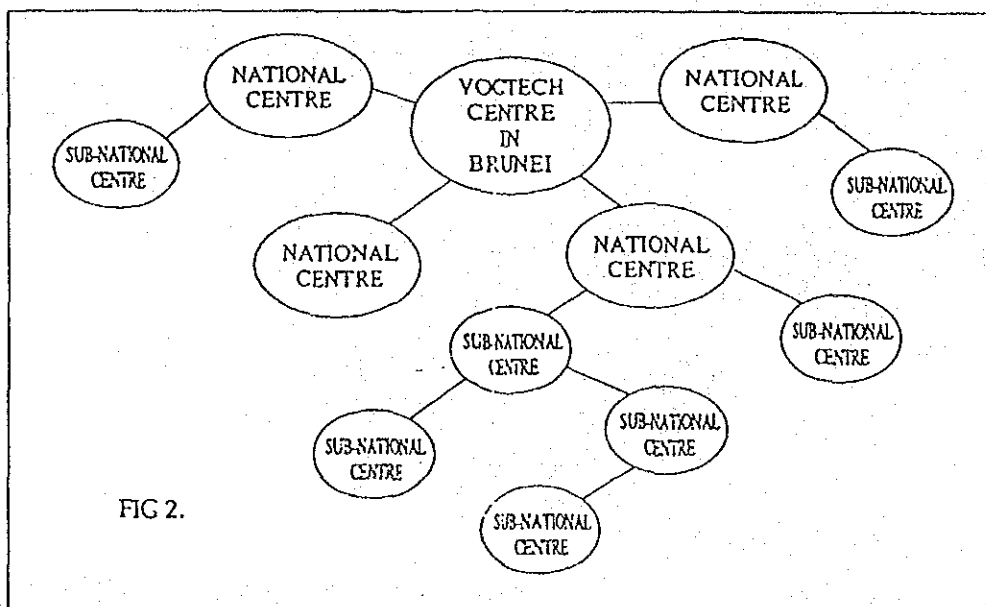
FIG. 1

The participants will return to their home countries and they will use the computer system they have at their organisation to research and assess needs. Based on their findings each participant will use the materials and skills learned at VOCTECH Centre to design, develop and implement a training programme for an optimum number of participants (4-8). There will be regular evaluations of the progress of Phase II, which will be closely monitored by the Centre through the telephone, fax, mail and personal visits by VOCTECH CENTRE Staff.

A participant will receive a Certificate of Competence in Vocational and Technical Education after satisfactorily completing Phase II and submitting a report.

c. THE INFRASTRUCTURE (Fig.2)

As mentioned earlier, as each group finishes Phase I and goes through Phase II, a miniature or replica of the VOCTECH Centre will be established by each participant in his/her respective country.



In time, the "graduates" of these secondary National Centres will train others and establish tertiary Sub-National Centres. The main VOCTECH Centre will continue to support these growing centres of innovation through conferences, distance education opportunities, providing human and other resources.

d. *THE COMPUTER DISK EXCHANGE PROGRAMME*

Each original and secondary participant will be trained in the use of the computer and in researching and using appropriate materials.

When the participants have completed the training programme, the VOCTECH Centre will maintain regular communication via the COMPUTER DISK EXCHANGE Programme. Information, newsletters, list of participants, projects and activities as well as new resources will be shared.

A relevant section on the disks can be printed and circulated by the original participants and subsequently by the secondary participants.

(6) Activities and Programmes

The Centre will focus its activities on three main areas aimed at addressing common interests and needs of Member Countries. These areas are *Staff Development, Research and Development, and Management Information Systems.*

a. Staff Development.

Analysis in the area of vocational and technical training has shown that a great need exists in all SEAMEO Member Countries for more staff development activities. There appears to be a large gap between the demand for in-service training for both administrators, teachers and other academic staff, and what is presently available. Major constraints to effective staff development are the lack of appropriate resource personnel, lack of appropriate infrastructure for a continuous programme of staff development and in some cases, inadequate budgets.

Target Groups

The approximate number of personnel requiring staff development training in the next five years as revealed by the survey made by the Experts Committee is as follows:

Table 1

Country	Administrators	Teachers	Others	Total	% Training Need
Brunei	37	120	-	157	0.35%
Indonesia	600	23,850	600	25,050	56.07%
Malaysia	14	335	-	349	0.78%
Philippines	146	7,814	1,111	9,071	20.30
Singapore	120	619	-	739	1.7%
Thailand	2,368	6,721	220	9,309	20.84%

Note:

Administrators = personnel or staff of the institute who have decision-making responsibilities for management e.g. Directors, Deputy Directors, Principals, Deputy Principals, Head of Departments/Divisions/Sections, Head of laboratories/Workshops.

Teachers = vocational and technical teachers/instructors teaching vocational/technical subjects excluding those teaching general subjects.

Others = personnel or staff providing academic support to improve the teaching and learning process e.g. curriculum developers, instructional media developers, resource centre personnel, researchers, vocational/technical guidance and counselling personnel excluding clerical staff.

Areas of Needs.

The specific areas of need for the next five years as identified by the Director-Generals, heads of institutions and staff of the institutions of the SEAMEO Member Countries are listed below:

- Work and Industrial experience
- Trainer Training
- Teaching Practice
- Personnel development for school hygiene
- General organisation
- Management and Planning of vocational education
- Upgrading and updating of trade skills
- Design of layout of school buildings and workshops
- Upgrading of pedagogical skills
- Evaluation of vocational and technical education programmes
- Educational innovation
- Computers-in-education
- Audio visual aids materials production techniques
- Research and Development
- Curriculum Design and Development
- Project Planning
- Vocational/technical development and evaluation
- Instructional materials development
- Professional role and development
- Management courses in vocational-technical education
- Information systems for vocational-technical education
- Entrepreneurial development training
- Innovative teaching methods
- Vocational guidance and Counselling
- Industry and Institution collaboration
- Teacher effectiveness training
- Institutional research
- Upgrading and special needs for vocational-technical teachers
- Management courses for administrators
- Research and development for researchers and teacher trainers
- Approaches to teaching with available resources
- Skills in pedagogy and professional experience
- Research methodology
- Computer for educational management
- Leader effectiveness training
- Cooperative/sandwich education
- Development and evaluation
- Management in vocational-technical education
- Computer-aided instruction
- Student assessment
- Improvement of technical teacher training programmes

Courses of Common Interest.

The activities and programmes of the Centre will address these common regional needs. However, it is envisaged that the Centre will only offer courses in which the Member Countries share an interest. These common interest courses focus mainly on management and pedagogical aspects of vocational and technical education. The Centre will also mount ad hoc courses in vocational and technical subject matters upon request from Member Countries. The areas of need can be grouped into the following themes:

- Philosophy, Theories and Models of Vocational-Technical Education and Training.
- Management.
- Teaching and Curriculum.
- Personal Development and Guidance.
- Trainer Training.
- Research.
- Special Needs.

Schedule of VOCTECH Activities and Programmes.

The VOCTECH Centre will start to implement its First Five-Year Development Plan in July 1993. Until then the Centre will carry out interim activities and programmes aimed mainly at collecting information for the formulation of the First Five-Year Plan.

The proposed number of training courses, regional seminars/conferences and research activities for the interim period and period covering the First Five-Year Plan is given in the tables below.

During the interim period the Centre proposes to run 3 training programmes and 2 regional seminar/workshop. The tentative schedule is given below:

Table 2

Tentative Dates		Regular Training Programme			Regional Seminars/Conferences			No. of Research Activities.
		No.	P.No.	Duration	No.	P.No.	Duration	
June	91	-	-	-	1	12	4 days	on-going
April	92	-	-	-	1	12	8 days	on-going
June	92	1	12	3 months	-	-	-	on-going
December	92	1	12	2 weeks	-	-	-	on-going
June/July	93	1	12	3 months	-	-	-	on-going

Table 3

First 5-Year Plan	Regular Training Courses			Regional Seminars/Conferences			No. of Research Activities.
	No.	P.No.	Duration	No.	P.No.	Duration	
July 93-June 94	1	12	3 months	1	12	8 8 days	on-going
	1	12	2 weeks				
July 94-June 95	1	12	3 months	1	12	8 8 days	on-going
	1	12	2 weeks				
	1	12	1 month				
July 95-June 96	1	12	3 months	2	24	8 8 days	on-going
	1	12	2 weeks				
	1	12	1 month				
July 96-June 97	1	12	3 months	2	24	8 8 days	on-going
	1	12	2 weeks				
	1	12	1 month				
	1	12	3 months				
July 97-June 98	1	12	3 months	2	24	8 8 days	on-going
	1	12	2 weeks				
	1	12	1 month				
	1	12	3 months				

P.No = estimated number of participants

b. Research and Development (R&D).

The Feasibility Study Report mentioned above also shows that there is a need for Research and Development activities to be upgraded and rationalised in all Member Countries. Major constraints to more effective R&D activities are: the lack of a formal unit under the appropriate ministry or department with specific responsibilities for R&D in vocational and technical training; the lack of appropriately trained researchers; inadequate budget and inadequate facilities and support from relevant agencies.

Research Areas.

Some of the research areas of concern for the next five years as perceived by the Director-General, heads of institutions and their staff in some of the SEAMEO Member Countries are:

- Cooperation between institutions and industries for the development of vocational-technical education
- Occupational analysis of occupations
- Utilization of automation in industry
- Entrepreneurial education and its impact on the economies
- Employability of vocational school graduates and evaluation of existing programmes
- Trends and direction of growth in industry
- Comparative study of vocational-technical education programmes in newly industrialised economies
- Emerging industrialized nations
- Feasibility of new courses in polytechnics
- Scientific research specialization
- Computer hardware
- Research on systems of vocational training
- Factors affecting learning and the effectiveness of the delivery system
- Effectiveness of using different media in vocational training
- Use of computer-aided teaching in vocational training
- Educational psychology e.g motivation in learning
- Problems affecting the learning process of trainees

c. Management Information Systems (MIS).

There is a need for Management Information Systems in SEAMEO Member Countries to be better developed. Links with national and regional/international organisations/networks need to be established. Although each of the Member Countries has a unit or agency responsible for MIS, MIS development is constrained by the lack of qualified personnel, inadequate facilities and budget.

On this subject, the Centre will undertake training to upgrade the skills and knowledge of personnel from Member Countries in such areas as

- MIS/data bank systems
- Systems Analysis; selection
- Implementation, maintenance and administration
- Guidance in how to make better use of data for planning, data collection, analysis and communication
- The use of micro-computers
- Innovative teaching methods

(10) DESCRIPTION OF REGULAR TRAINING PROGRAMME

a. Introduction

It is critical that VECTECH begins its professional development activities with senior executives from the various Vocational and Technical Education systems within the SEAMEO countries. The nature of the programme - a three-month theory and skill building phase followed by a six to twelve months practical phase to establish local VECTECH Subcentres - requires the commitment of senior decision-makers having the authority and access to resources needed to initiate and develop the multiplier effect of the SEAMEO VECTECH Centre.

b. Intended Participants

Senior men and women of the Principal, Director, Deputy Principal and Deputy Director levels are sought for these two initial programming years. These people will have executive responsibility for their respective institutions or ministries and will not have been in their present positions for more than 3 years. Candidates who have been identified as potential senior executives will also be considered.

It is essential that each candidate have a demonstrated record of achievement in change and innovation within Vocational/Technical Education and that they be known for their creativity, flexibility and enthusiasm. They must be willing to stay for the full three months - six days per week for twelve weeks. It is further essential that candidates clearly express interest in and be willing to make a commitment to the establishment of a VECTECH Subcentre in their own locale or region. This will require resourcefulness and a contribution of their own time to complete the second phase of the three-month VECTECH programme - the establishment of a subcentre mirroring, in whatever modest way, the functions of the SEAMEO VECTECH Centre in Brunei - training and/or development, research and MIS applications.

C. The Format of the Programme

(A) The Three-Month Programme

Twelve to fifteen participants from the member SEAMEO nations (two [2] from each of the six [6] active SEAMEO members with the possibility of accommodating one [1] or more from other non-active member nations) will, in the May to August time frame of 1992 and 1993 come to Brunei for a period of three (3) months. Upon completion of this first phase the participants will return to their respective locations and for a period of from six to twelve months, instruct or direct a local group of four (4) or more secondary candidates in a programme based upon the one they themselves have just completed while establishing an MIS and resource centre capability. The actual project carried out in Phase II will be tailored to the role and circumstances of the Phase I participants.

Support for this second phase will come in the form of telephone discussions, correspondence, personal visits and resource materials from the professional staff of the SEAMEO VOCTECH Centre.

Each Phase I candidate will have an adviser with whom he/she can maintain contact throughout Phase II.

(B) Seminars and Workshops

Short programmes will be offered as funding permits. The regular three-month programme consists of units or modules which can be made available on location within various SEAMEO countries or provided in Brunei. No short programme is anticipated for 1992 but based on available resources one or more may be offered in 1993.

(C) Distance Education

Working closely with the Brunei Ministry of Education and the Brunei Distance Learning Centre a distance education programme in an open learning format is planned to be offered in the area of a Master's Degree in Educational Administration, to be granted by the University of Brunei Darussalam.

Although this programme would be independent of the VECTECH Centre, a close association with it is being developed in terms of the continuity of curriculum between the three-month programme and the Master's Degree programme. The Educational Administration Master's Degree programme would include a speciality in Vocational and Technical Education.

d. *The Delivery of the Programme*

The three-month programme consists of units or modules that could be expanded into seminars and workshops as short term offerings on site in Brunei or throughout the other SEAMEO countries. Also, the units could be developed into full courses as credits toward a distance education Master's Degree in Educational Administration.

There are four (4) required units and as of 1992 there will be seven (7) optional units. Three-month participants should choose four (4) or more options. Each unit will run either mornings or afternoons for 10 days with the exception of the MIS and Computer Applications Unit. The first four (4) afternoon time blocks will be scheduled for this unit with an option of choosing additional computer time in the three (3) remaining blocks - mornings or afternoons.

Each participant will be allocated a work station for his/her own use while on the programme. They will use the computer system at their respective countries to complete Phase II of the programme - establishing a Subcentre and training and/or developing secondary participants. The last required unit - "Project Management" is designed to prepare the three-month participants to carry out Phase II.

TENTATIVE SCHEDULE FOR THREE MONTH PROGRAMME

6 days per week for 12 weeks (Friday free)

72 days - 2 days Orientation,

70 days in 7 ten-day blocks

UNIT		TIME BLOCKS						
		A	B	C	D	E	F	G
		2 DAYS	10 DAYS	10 DAYS	10 DAYS	10 DAYS	10 DAYS	10 DAYS
* ORIENTATION	M	██████						
	A	██████						
①	M		██████					
* LEARNING	A		██████					
②	M					██████	██████	██████
* HIS & COMPUTER	A		██████	██████	██████	██████	██████	██████
③	M		██████					
* RESEARCH	A		██████					
④	M			██████				
LEADERSHIP	A			██████				
⑤	M				██████			
PLANNING	A				██████			
⑥	M					██████		
EVALUATION	A					██████		
⑦	M						██████	
INDUSTRY	A						██████	
⑧	M							██████
HRD	A							██████
⑨	M						██████	
PRD	A						██████	
⑩	M							██████
PROGRAMME DEVELOPMENT	A							██████
⑪	M							██████
* PROGRAMME MANAGEMENT	A							██████

M = MORNING

A = AFTERNOON

* = REQUIRED

██████ = SCHEDULED TIME

□□□□ = OPTION IN LIEU OF SCHEDULED TIME

NOTE: Participants are expected to choose 4 options but may take all units if they so wish. If no unit is chosen for a particular time block it is expected that at least one half day will be devoted to HIS and computer applications.

e. *Description of the Content*

Based on the training needs expressed by the SEAMEO Member Countries mentioned earlier, the following modules/units are developed to fulfill these requirements. These units are described below.

(a) ORIENTATION

The first two days will be spent familiarizing the participants with their surroundings, introducing themselves to each other, getting adjusted to their living conditions and being briefed on the nature, procedures, content and expectation of the programme.

(b) UNIT 1 - ADULT LEARNING : A PRACTICAL APPROACH

This first unit serves two main purposes. The participants will look at themselves as adult learners and clarify their understanding and their own optimal approaches to learning - particularly as self-directed learners. The second area of emphasis will be to provide the participants with knowledge and understanding of the importance of learning-how-to-learn in the field of Vocational and Technical Education. If all future programming for the training of adults and youth for job preparation or the upgrading of employed individuals contains a learning-how-to-learn component, the rate of skill development, the degree of self-satisfaction, and the rate of productivity in business, industry and government will be greatly enhanced while reducing costs for formal training. Learning-how-to-learn is the value-added component to any training or educational experience. Through further developing their own skills in learning-how-to-learn participants will be able to make suggestions and recommendations to their staff and colleagues on how to integrate a learning-how-to-learn component into the curriculum. Participants will also be more effective learners as a result of this skill building unit and maximise their time and effort as learners in the three-month programme.

A. Principles of Adult Learning

- Pedagogy versus Androgogy
- Learning Styles and Learning Inventories
- Self-Directed Learning

B. Learning-How-To-Learn

- Cognitive, Affective and Psychomotor Learning
- Critical Reflection as a Mode of Learning
- The Learning Cycle
- Adult Learning Projects

C. Ways of Learning-How-to-Learn

- The Learning Contract
- Logs, Diaries and Journals
- Use of Media
- Human Resources - Mentors, Partners, Advisors, Counsellors

D. Facilitation of Learning-How-to-Learn

- Climate and Attitude
- Motivation of Learners
- Training Others to Learn

UNIT 2 - MANAGEMENT INFORMATION SYSTEMS AND COMPUTER APPLICATIONS IN VOCATIONAL AND TECHNICAL EDUCATION

The participants will be expected to become computer literate as users of a microcomputer. They will be introduced to the three basic software packages: wordprocessing; spreadsheet; and database. Data communications using the modem will also be introduced. Basic competence in the use of the hardware and software including DOS utilities will be achieved by each participant. It is anticipated that all reports and discussion papers will be produced on the participant's own work station for his/her exclusive use during the programme.

The fundamentals of management information systems will be introduced and participants will begin to apply their knowledge and skills to develop a system to meet their particular local needs and the needs of the Subcentre they will establish.

A. Hardware and Software Applications

- Microcomputer and Network Applications
- Datacommunications and Its Application to Distance Education
- Using Wordprocessing, Spreadsheet and Data base Programmes

B. Management Information Requirements

- The Nature of Decision-Making
- Basic Financial Information
- Basic Programme Information
- Basic Human Resources Information
- Basic Student Information

C. Designing an MIS

- Doing the Analysis of the Information Flow and Requirements
- Determining What Reports are Needed for Decisions
- Choosing the Best Alternatives to Meet Your Needs Including Both Paper and Electronic Systems

D. Implementing an MIS

- Developing a Plan of Implementation
- Choosing the Right People
- Managing the Human Environment
- Maintaining, Servicing and Modifying the System

UNIT 3 - APPLIED RESEARCH and RESOURCE ACQUISITION AND ORGANISATION IN VOCATIONAL AND TECHNICAL EDUCATION

The participants will be introduced to a variety of practical research approaches and tools. Through the library facilities at UBD each participant will engage in bibliographic research of a topic of interest. Ways and means of staying current in their own field will be discussed.

Each participant will be expected to design and implement a research project for Phase II of the program and begin organising, through their own local resources and with input from the SEAMEO VOTTECH Centre, a Vocational and Technical resource centre - however modest.

A. Approaches to Research

- The Nature of Applied Research
- The Practice of Field Research
- Quantitative and Qualitative Methods
- Basic Statistics

B. Research Resources and Systems

- The ERIC System
- The Resources of the UBD library as an Adjunct to the VOCTECH Centre
- Setting Up a Resource Acquisition System
- The Information Exchange System of the SEAMEO VOCTECH Centre and the Local VOCTECH Subcentres
- The INNOTECH REIN Database and Resources at Other Regional Centres

C. Developing a Viable Applied Research Project in Vocational and Technical Education

- What is a Researchable Topic
- How to Find Help
- Developing a Research Plan
- Collecting Data via Interviews, Surveys and Questionnaires
- Analysing and Interpreting the Data
- Presenting the Research, Writing a Research Report

UNIT 4 - LEADERSHIP IN VOCATIONAL AND TECHNICAL EDUCATION

This unit will draw heavily upon the experience of the participants in order to share their own perceptions of the meaning of leadership. Videos, readings, role play and case studies will be used to provide stimuli for the participants to reflect upon their current and desired behaviour as leaders. Visioning and motivation are the two major themes while others may be developed from the group itself. Each participant will, with the help of the other participants, develop a mission statement and goals for their own organisation.

A. Visioning and Clarifying the Mission of Your Organisation

- The Fundamentals of Vocational and Technical Education as Perceived by UNESCO
- Comparison of Various Vocational and Technical Education Systems and How They Address Labour Market Needs
- Developing a Mission Statement.
- Deriving Goals and Objectives From the Mission Statement

B. Motivating the Staff

- The Provision of Resources
- Professional Development for Staff
- Building a Reward System
- Encouraging Innovation
- Governance and Participation
- Providing Career Development Opportunities

UNIT 5 - PLANNING WITHIN VOCATIONAL AND TECHNICAL EDUCATION

The main thrust of this unit will be on strategic planning and its offshoots of operational and action planning. It is recommended that those choosing Unit 4 - "Leadership in Vocational and Technical Education" also take Unit 5. Effective strategy to carry a Vocational or Technical institution into the future is built upon a clearly shared vision stated as a mission and requires motivation, i.e., leadership is needed for effective planning. Participants will go through strategic planning exercises using their own situations as examples. Each participant will develop a plan of action for actually developing a strategic plan for their respective organisations when they return.

A. Translating the Mission into a Strategic Plan

- Developing the Key Functions and the Goals of the Organization
- Conducting an Internal Analysis of Strength and Weakness
- Conducting an External Analysis of Opportunities and Constraints
- Deriving Objectives by Building on Strengths and Opportunities and Reducing Weaknesses and Constraints
- Developing Action Plans for Objectives - What, How, Who, When, With What Resources, and How Will You Know You Have Succeeded?

B. Other Approaches to Planning

- Short Term Versus Long Term Planning
- Operational Planning
- Financial Planning
- Emergent Planning
- Participatory Planning
- Human Resources Planning

UNIT 6 - CONTROL AND EVALUATION WITHIN VOCATIONAL AND TECHNICAL EDUCATION

This unit deals with executive competency in the follow-up and feed-back "loop" of management. Senior Managers must be accountable for quality results and require ways and means of controlling and evaluating as well as setting policy, leading, planning, initiating and organising. Quality is seen here as adherence to requirements and requirements are standards that are set through policy. Evaluation is hence the approach to maintenance and improvement of quality while controls are the tools needed for maintenance and adjustment. The participants will use their own experience as the vehicle or medium for understanding and applying control and evaluation means and ways. It is recommended that those who choose Units 4 and 5 also complete Unit 6. The three units tend to form an integrated approach to administration and management.

A - Setting and Monitoring Standards

- The World of Work as the Key Criterion in Vocational and Technical Education Programming
- The Management by Objectives Approach
- Performance Reviews of Staff, Based on Mutually Established Objectives
- Identifying and Verifying Indicators of Success in Meeting Objectives

B - Evaluation as Quality Improvement Rather Than Judgement

- Quality as Adherence to Requirements
- Continuous Assessment Versus Final Assessment (Formative versus Summative)
- Participation of All Stakeholders in Evaluation
- The Programme Review Process

C - Establishing Financial Controls

- Forecasting Budget Requirements
- The Yearly Budget as a Shared Document : Its categories and Level of Detail
- Required Financial Indicators
- Basic Financial Reports
- Forms and Signatures - How many and Signed by Whom.

UNIT 7 - BUILDING RELATIONSHIPS WITH INDUSTRY AND BUSINESS

The unit stresses the need for Vocational and Technical education to form close links with the world of work - i.e. the private sector. Effective vocational and technical training matches the needs of industry and business in terms of the skills and competencies of the graduates. For countries which are developing economically and diversifying their economies, their industrial strategy needs to be tied to their labour market strategy and in turn to the educational and training strategy of the vocational and technical education systems. Participants will learn to do some primary analysis of the industrial needs in their respective areas and discuss various ways that links can be made to the private sector. Specific situations will be discussed and representatives of industry and business will be invited to take part in these discussions. Participants will formulate plans for how their organisation can form or improve on links with industry.

A - Industrial and Business Trends

- Entrepreneurship and its Implications for Education
- The Globalisation of Markets
- Structural Changes in the Private Sector
- The Impact of High Technology on Business and Industry: The Automated Office; Data Communications; CAD/CAM; Computer Integrated Manufacturing; Local Area Networks; Management Information Systems
- Demographic Changes in Developed and Developing Countries and the Impact on the Labour Market and Training

B - Linking the Institution with Industry and Business

- The concept of Technology Transfer
- The Use of Program Advisory Committees
- Setting Up Partnerships with Industry and Business (Training and Recruitment in Exchange For Equipment and Expertise)
- Co-op and Work Placement Programmes for Students, Plant Visits
- Industrial Attachments for Staff
- Providing Contract Training and Part-Time Programmes for Industry and Business
- Industrial Experts as Associate Instructors and Guest Lecturers
- Co-operation with Industry Schools

UNIT 8 - HUMAN RESOURCES DEVELOPMENT IN VOCATIONAL AND TECHNICAL EDUCATION

The focus in this unit is on planning for and the provision of services to staff. Candidates choosing this unit should also consider Unit 5, "Planning Within Vocational and Technical Education". In fact, Vocational and Technical Education is a knowledge industry. The development of the human resources within all roles and functions of the organisation is critical. Training and development as learning experiences for staff are both important and are often called 'Professional Development' but these are not the only considerations in building good morale, motivating staff and providing job satisfaction. Good planning and effective services contribute to HRD. Participants will draw upon their own experience to articulate real case studies and situations to problem-solve and plan aspects of human resource development that they can use at their own home sites.

A - Human Resource Planning

- Developing a Human Resource Strategy to Meet the Needs and Objectives of the Organization
- Developing Job Descriptions and Competency Profiles for Jobs
- Recruiting Appropriate Staff
- Providing Orientation and In-Service Training Opportunities
- Building a Professional Development Team
- Resourceful Ways of Providing Professional Development Opportunities
- The Reward System - What It Is and How to Create One
- Promotion and Succession Policy-Making

B - Human Resources Services

- Reviewing the Personnel Services - Salary Scales, Benefits, Leave and Study Plans, Tenure, Performance Reviews
- Fitness Facilities and Opportunities
- Extra Curricular Activity - Social Occasions and Celebrations, Clubs, Interest Groups, Credit Unions, Group Purchases, Group Travel Opportunities, Talent Nights
- Health Services
- Counselling Services - Career Development, Personal and Financial Counselling

UNIT 9 - PHYSICAL RESOURCE DEVELOPMENT IN VOCATIONAL AND TECHNICAL EDUCATION

This unit is again related to planning and deals with the special design requirements for Vocational and Technical Education. It is recommended that those choosing this Unit should also do Unit 10, "Programme Development in Vocational and Technical Education".

The programme requirements as identified in the programme development process are inputs to the physical resource planning process. Participants will be encouraged to identify problem areas from their own locations and to draw from experience to enhance the discussion and to help each other formulate plans and procedures to design/modify and equip their respective institutions.

A - Choosing the Appropriate level of Technology for Student Training

- Determining Entry level Requirements of the Occupation for Which Students are Being Trained
- Matching Industry's Needs With the Institute's Capability to Provided Resources
- Developing Specifications for Facilities and Equipment

B - Facilities Planning

- Design of Facilities - Shops, Labs, Classrooms and Other Learning and Service Areas
- Equipping Facilities - Approaching Industry, Sharing of Equipment, Acquisition of Equipment
- Servicing and Maintaining Facilities and Equipment
- Budget Projections and Procedures for Physical Resources

UNIT 10 - PROGRAMME DEVELOPMENT IN VOCATIONAL AND TECHNICAL EDUCATION

This unit introduces the systems approach and competency based education as fundamental to a job-driven curriculum that will meet the needs of industry and business. The model is inclusive in that it encompasses all aspects of the curriculum within the context of Vocational and Technical Education. Using the process and procedures as set out in

the whole approach the participants will be able to focus on those elements most critical for their own organisations and identify the competencies hence the specialists who will be needed to produce graduates with skills required by industry.

A. The Fundamentals of a Vocational and Technical Education Approach to Programme Planning

- The Systems Approach
- Competency Based Education

B. The Context for Vocational and Technical Education Programme Planning

- Determining the Economic Policies and Strategy for the Country or the Region
- Determining the Labour Market Strategy and Needs Through Analysis
- Determining the Occupational and Job Areas for Which Training is Required Using a Standard Classification System Such as CCDO or DOT (Canadian Classification and Dictionary of Occupations and Dictionary of Occupational Titles of the USA)

C. Determining the Competencies Required to Do the Jobs as Previously Identified

- The DACUM Process for Job Analysis to Identify Competencies
- Task Analysis to Determine Steps, Equipment, Skills and Knowledge, Safety Requirements
- Writing Terminal Performance Objectives

D. Curriculum and Instructional Development

- Instructional Analysis to Determine Modules or Units
- Instructional Design and Development to Determine Sequence and Methodology

E. Delivery of Instruction

- Developing Lesson Plans
- Developing Instructional Materials
- Developing Tests
- Pilot Testing the Instruction

F. Evaluation of the Programme

- Assessing Effectiveness of the Graduates in Industry
- Assessing Labour Market Needs and Whether These are Being Meet

UNIT 11 - PROJECT MANAGEMENT

This unit is required for all participants and will be offered last in the Programme. General project management skills and knowledge will support the specific preparation for carrying out Phase II of the program - the development of a VOCTECH Subcentre at the home site of each participant.

Participants will prepare a project plan which will include a learning plan for themselves and a training plan for the candidates they select to train or develop through the Subcentre to be established.

The format will be as an individual learning project. Each participant will design a unique project suited to her/his circumstances and success in terms of being granted the certificate for completion of the Three-Month Programme will be based on meeting the objectives set out in the project plan which was mutually agreed to by the participant and the SEAMEO VOCTECH adviser

A. Initiate the Project

- Conceptualise the Project With the three Essential Components-Professional Development, Research and Resource Acquisition, and MIS and Distance Education Capability
- Obtain Feedback from Colleagues and Make Adjustments
- Write a Learning Plan for Your Own Further Development

B. Conduct a Needs Assessment of the Participants in the Project

- Conduct interviews or Surveys Regarding the Needs and Wants of Potential Participants in the Project
- Analyse and Interpret the Data
- Write a Training Plan for the Participants

C. Develop a Project Plan

- Identify the Tasks
- Determine the Timing for Each Task
- Determine How the Tasks Will be Carried Out
- Determine who will be Involved
- Determine What Resources Will be Needed
- Set Out the Criteria or Indicators of Success
- Involve the Participants in the Process

D. Implement the Project

- Participate in the Facilitation of the Tasks So That Your Own Learning Objectives Are Met
- Draw on VOCTECH for Support - Both Consultative and Learning Materials Through the Learning Resource Centre (UBD)
- Monitor the Use of the VOCTECH Computer and MIS Development Throughout This Project

E. Evaluate the Project

- Conduct Formative Evaluation of the Project and the Progress of the Participants
- Write a Formal Report for Submission to VOCTECH as Based on Your Learning Plan the Training Plan for the Participants and the Project Plan Objectives.

F. Continue to Be Involved in Your VOCTECH Subcentre

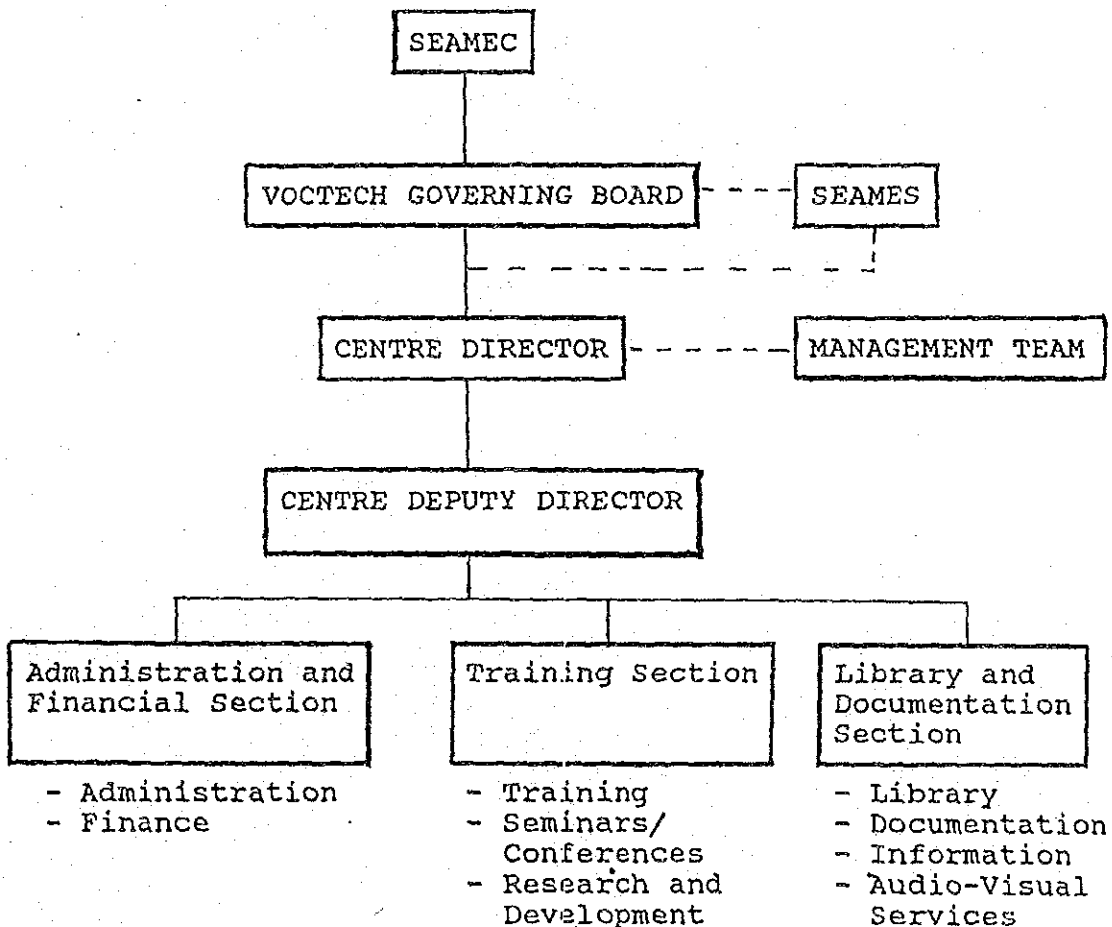
- Delegation of Responsibilities
- Provide Continued Support and Counsel to Future Participants
- Maintain the Communication with VOCTECH and Other SEAMEO Regional Centres
- Ensure that the Computer Work Station Continues to Be Used For the Three Functions of the Subcentre as Well as For Other Institutional Purposes.

f. MANAGEMENT AND ORGANISATION

The SEAMEO-VOCTECH Regional Centre operates in the same manner as the other SEAMEO Regional centres/project. The organisational structure of the VOCTECH Centre consists of a policy-making body called the Governing Board, whose executive power is vested in the Centre Director with the help of professional and general service staff.

Below is the organisational structure of VOCTECH during its interim period.

The VOCTECH Centre's Organisational Chart.



The VOCTECH temporary office will be housed initially at converted teachers' quarters on the campus of the Saiful Rijal Technical College. From this temporary office, VOCTECH will coordinate its activities and programmes, some of which may also be conducted outside Brunei Darussalam.

The expected staff contingent by the end of the interim period is as follows:

A. Administrative and Financial Section.

- 1 Centre Director
- 1 Deputy Centre Director
- 1 Administrative Officer
- 1 Secretary
- 1 Clerk/Typist
- 1 Office Attendant
- 1 Driver
- 1 Janitor

B. Training Section.

- 2 Specialist in Vocational and and Technical Education.
- 1 Specialist in Vocational and Technical Education, Research and Development.
- 1 Specialist in Management Information Systems.

C. Library and Documentation Section.

- 1 Librarian and Documentation Officer.

(11) VOCTECH FUNDING REQUIREMENTS.

The setting up and running of VOCTECH Centre will be made possible by the provision of funds. According to the SEAMEO Financial Operations Manual, there are 3 types of funds namely, *Special Funds, Capital Funds and Operational Funds.*

a. Special Funds for Activities and Programmes

The table below shows the estimates based on the proposed implementation schedule mentioned in Table no.2 and 3. All estimates are based on quotas recommended by the Experts Committee in the Feasibility Study Report.

Interim Period.

Table 4

Programmes and Activities	Years		
	90/91	91/92	92/93
<u>Training and Research Scholarships.</u>			
- No. of courses	-	1	2
- No. of participants	-	12	24
The estimated cost per scholar is US\$2,238.		12 x 2,238	24 x 2,238
=		26,856	53,712
<u>VOCTECH Governing Board Meeting.</u>			
- No. of VOCTECH GBM	1	1	1
The estimated cost of a 3-day VOCTECH GBM in Brunei Darussalam attended by one representative from each of the active SEANHO countries is US\$13,820	13,820	13,820	13,820
<u>Seminars and Conferences.</u>			
- No. of Seminars/Conferences	1	-	1
The estimated total cost per seminar or conference in Brunei Darussalam for 8 days is US\$27,940			
=	27,940	-	27,940
<u>Personnel Exchanges.</u>			
Sub total	41,760	40,676	95,472
plus 10% for contingencies	4,176	4,067	9,547
Total	45,936	44,744	105,019
Total = US\$ 195,699.00			

First 5-Year Development Plan.

Table 5

Programmes and Activities	Years				
	93/94	94/95	95/96	96/97	97/98
<u>Training and Research Scholarships.</u>					
- No. of courses	2	3	3	4	4
- No. of participants	24	36	36	48	48
The estimated cost per scholar is US\$2,238	24 x 2,238	36 x 2,238	36 x 2,238	48 x 2,238	48 x 2,238
=	53,712	80,568	80,568	107,424	107,424
<u>VOCTECH Governing Board Meeting.</u>					
- No. of VOCKETCH GBM	1	1	1	1	1
The estimated cost of a 3-day VOCKETCH GBM in Brunei Darussalam attended by one representative from each of the 7 SBAMBO countries is US\$13,820	13,820	13,820	13,820	13,820	13,820
<u>Seminars and Conferences.</u>					
- No. of Seminars/Conferences	1	1	2	2	2
The estimated total cost per seminar or conference in Brunei Darussalam for 8 days is US\$27,940	27,940 x 1	27,940 x 1	27,940 x 2	27,940 x 2	27,940 x 2
=	27,940	27,940	55,880	55,880	55,880
<u>Personnel Exchanges.</u>					
Sub total	95,472	122,328	150,268	177,124	177,124
plus 10% for contingencies	9,547	12,233	15,027	17,712	17,712
Total	105,019	134,561	165,295	194,836	194,836
Total = US\$ 794,547					

b. Physical Requirements (Capital Funds).

Buildings.

During the first few years of operation the Centre will make use of already existing national and regional facilities. However, it is hoped that by the 5th year of operation the Centre will have its own buildings and other operational facilities.

The estimated cost of the building requirements is set out below.

Academic Wing.

- a) 2 lecture rooms @ 55 sq.m
 - b) 6 Syndicate rooms @ 18 sq.m
 - c) A Resource Centre to accommodate reading room, Documentation Officer, and Audio-Visual Section
- Total of 318 sq.m

Total Space = 536 sq.m ----- US\$235,000.

Administrative Block.

- a) Office for Director and Deputy Director.
Total of 73 sq.m
- b) 12 Specialists/Consultants rooms @ 45 sq.m
- c) Meeting room
Total = 45 sq.m
- d) General offices
Total = 182 sq.m
- e) Toilets, circulation area
Total = 182 sq.m

Total Space = 1,022 sq.m --- US\$600,000.

Quarters.

- a) 30-bedroom hostel
Total = 1364 sq.m --- US\$550,000.
- b) 15 apartments for staff and visitors
Total = 4091 sq.m --- US\$1,865,000.

Total	US\$ 3,250,000
15% Professional Fees	US\$ 487,500
6% Preliminaries	US\$ 195,000
<hr/>	
Total	US\$ 3,932,500

Equipment and Furniture.

- Office equipment/Furniture
- Classroom Furniture
- Furniture for meeting room
- Furniture for hostel and apartments
- Computer facilities
- Library Furniture

----- US\$314,600.

Library/AVA Materials

- Journals
- Books
- Reports/monographs
- Audio-Visual software

----- US\$204,400.

Transport

- A van
- A Car

----- US\$48,000.

The Total Capital Funds Requirement is US\$4,499,500.

c. Operating Funds.

The Centre's staff at the beginning of its operation will be minimal. It will grow towards the end of the first Five-Year Plan as the number of activities and programmes increases.

Below is a table showing the proposed staffing pattern of the Centre for the Interim Period and the First Five-Year Plan.

Staff Position	Personnel Requirement								
	Interim Period			First 5-Year Development Plan					
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	
Professional Staff									
1. Director	1	1	1	1	1	1	1	1	
2. Deputy Director	-	1	1	1	1	1	1	1	
3. Specialist	1	3	3	4	6	8	9	9	
4. MIS Officer	1	1	1	1	1	1	1	1	
sub-total	3	6	6	7	9	11	12	12	

General Service Staff									
1. Financial Officer/ Accountant	-	1	1	1	1	1	1	1	1
2. Secretary	1	1	1	2	2	2	2	2	2
3. Librarian and Documentation Officer	1	1	1	1	1	1	1	1	1
4. Accounting Clerk	-	-	-	-	-	1	1	1	1
5. Clerical Assistant	1	1	1	1	2	2	2	2	2
6. Office Attendant	1	1	1	1	1	1	1	1	1
7. Driver	-	-	1	1	2	2	2	2	2
sub-total	4	5	6	7	9	10	10	10	10
Total	7	11	12	14	18	21	22	22	22

Based on this staffing pattern, an estimate for operating funds for the Interim Period and the 5-Year Plan is set out below.

Operating Funds *	Funds Required (US\$)								
	Interim Period			First 5-Year Development Plan					
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	
a) Salaries and Wages	73,776	135,096	142,742	168,636	210,096	250,296	273,264	276,972	
b) Staff Benefits	8,895	15,145	16,456	19,686	23,359	26,277	27,687	28,133	
c) Travel and Transport	10,000	25,300	28,100	31,200	34,600	38,400	42,600	42,600	
d) Operating Supplies	10,000	28,200	28,400	30,500	32,600	34,900	37,400	37,400	
e) Communications	6,000	14,000	15,600	17,600	20,000	22,500	25,400	25,400	
f) Utilities	6,000	47,600	51,000	54,600	58,400	62,500	85,000	85,000	
g) Seminars and Conferences	12,000	14,400	17,700	22,000	27,300	33,800	41,900	41,900	
h) Repairs and Maintenance	6,000	-	-	-	-	-	-	-	
i) Fund-Raising and Public Relations	10,000	20,000	22,900	26,200	29,900	34,000	38,800	38,800	
j) Representation and Entertainment	3,000	4,000	5,000	6,000	7,200	8,600	10,400	10,400	
k) Professional Services	10,800	12,100	13,700	15,600	17,800	20,300	23,100	23,100	
l) Clearing House and Publication	13,900	15,700	18,100	21,100	24,700	28,900	33,800	33,800	
m) Insurance	7,000	7,700	8,500	9,400	10,400	11,600	12,900	12,900	
n) Miscellaneous	12,800	14,600	16,700	19,100	21,800	24,822	28,200	28,200	
Total	196,881	353,841	384,898	441,622	518,155	596,895	680,451	684,605	
Total	US\$935,620.00			Total US\$ 2,921,728					

* Based on the average of Operating Funds requirements of some SEAMEO Centres as approved by the Council for F.Y 1989/90 and 1990/91.

Summary of the funding requirements of the VOCTECH Centre.

Funds	Estimated Funding Requirements for the Interim Period 1990-1993	Estimated Funding Requirements for the First 5-Year Development Plan 1993-1998
Capital	-	US\$4,499,500
Operational	US\$935,620	US\$2,921,728
Special	US\$195,699	US\$ 794,547
Total	US\$1,131,319	US\$8,215,775

(12) CONCLUSION.

The SEAMEO region is among the fastest developing area in the world. The growth of its emergent economies depends and will depend on its ability to compete with other economies at a technologically advanced level. Hence the concern for vocational and technical education and the perceived need to establish a SEAMEO Regional Centre for vocational and technical education.

It is hoped that the Centre will make a substantial contribution to the upgrading and updating of vocational and technical education of SEAMEO countries, especially those needing assistance most (see Table no.1).

The Centre will also aim at establishing a pool of manpower as international as possible, to achieve excellence and a high degree of cooperation and cross-fertilization.

MAKTAB KEJURUTERAAN
JEFRI BOLKIAH

5. MAKTAB KEJURUTERAAN JEFRI BOLKIAH

(1) COLLEGE OBJECTIVES

1. To provide courses which are of direct relevance to Brunei Darussalam. To Make the running of such courses as cost effective as possible, utilising the College facilities to the fullest.
2. To encourage both staff and students to achieve academic and professional excellence.
3. To equip the students with the necessary qualifications/skills/experience to enter the world of employment.
4. To help students to acquire a more direct appreciation of the practical applications of the qualifications towards which they are working.
5. To give the students the opportunity to have direct contact and training with a number of local employers in relevant fields. This will, as far as possible, bridge the gap between the world of education and the world of work.
6. To develop students' self-reliance so that they can think, learn and work independently.
7. To train the students to use their skills and knowledge to solve the real problems they will meet at work.
8. To foster the students' initiative, motivation and enterprise, problem-solving skill and other aspects of personal development.
9. To inculcate in the students a positive attitude to practical/manual work and indicate ways in which the skills and qualification they have earned at college can be put to use in their future careers e.g. by setting up a business, by joining certain organisation, etc.
10. To foster in the students proper working habits, a sense of responsibility, punctuality, respect, courtesy and cooperation.
11. To strengthen Islamic and moral values.
12. To uphold and better the reputation of the College among students and employers and the general public.

13. To expose the following "target" groups to the College, the courses it runs and the qualifications it awards:

- a). School-leavers and other potential students.
- b). Local employers.
- c). The local community and wider public.

(2) ADMISSION

ADMISSION PROCEDURE

Application for courses are made through the Principal of Jefri Bolkihah College of Engineering. An applicant should fill in the courses titles applied for in order of preference in a specially prescribed form which is obtainable from the college.

Successful and unsuccessful applicants will be notified of the results of their applications in writing.

Applicants who are already in employment must submit their applications through their respective Departments. Such applications will be considered only when the Head of Department concerned has given his/her approval.

THE COLLEGE OFFERS:

A. Basic Course
Local Certificates

1. Basic Engineering Course - General
2. Basic Engineering - Refrigeration and Air Conditioning

Each of the above courses has a duration of one year fulltime.

B. Craft Course
City & Guilds of London Institute Certificates.

1. C & G 821 Metal Machining I
2. C & G 821 Mechanical Fitting (General)
3. C & G 821 Metal Machining II
4. C & G 822 Welding and Fabrication

5. C & G 823 Electrical Installation Practice (part I)
6. C & G 825 Motor Vehicle Mechanics (Part I)
7. C & G 825 Motor Vehicle Mechanics (Part II)
8. C & G 827 Domestic Refrigeration and Air Conditioning (Part I)
9. C & G 827 Industrial Air Conditioning (Part II)

Each of the above courses has a duration of one year fulltime.

C. Marine Engineering - awarded locally by the Brunei Marine Department, Ministry of Communication, Brunei Darussalam. (2 years sandwich).

D. Technician Courses

1. Business & Technician Education Council National Certificates/Diploma.

- i. BTEC First Certificate/Diploma in Engineering (1 year full time)
- ii. BTEC National Certificate in Mechanical/Production Engineering (2 years sandwich)
- iii. BTEC National Certificate in Welding and Fabrication (2 years sandwich)
- iv. BTEC National Certificate in Electrical and Electronics Engineering (2 years sandwich)
- v. BTEC National Certificate in Computer Studies (2 years sandwich)
- vi. BTEC National Certificate in Industrial Measurement and Control (2 years sandwich)
- vii. BTEC National Diploma in Agriculture Engineering (2 years sandwich)
- viii. BTEC National Diploma in Agriculture Engineering (3 1/2 years sandwich)
- ix. BTEC National Certificate in Building Services Engineering (2 years sandwich)

2. City and Guilds of London Institute Certificates

- i. C & G 803 Electrical Installation Work (Part I)
- ii. C & G 803 Electrical Installation Work (Part II)

The duration of each the above courses includes two periods of six months of Industrial Attachment

E. Ad-hoc/Short Courses

These are courses specially designed on request from Government Departments, including Royal Brunei Armed Forces.

TEST AND INTERVIEW

Eligible applicants are asked to attend tests and an interview. Attendance in the tests and interview is compulsory. The final recommendation for acceptance on a course is based on the tests and interview.

ENTRANCE REQUIREMENTS

The General Entrance Requirements are as follows:-

- A. Basic Course : BJCE pass in Mathematics, Science/English
- B. Craft Course (C.G.L.I.) : Satisfactory completion of basic Engineering Course. For part II and III Certificates.
- C. Craft Course (Marine Eng.) :
 - 1. BJCE pass in Mathematics, Science/English
 - 2. A Certificate of Medical Fitness
 - 3. A Sight Test Certificate.
 - 4. Ability to swim 100m.
- D. Technician Course :
 - 1. 1st. Certificate/Diploma in Engineering.
 - i. Passes in relevant Subjects at B.G.C.E. 'O' Level, normally in Mathematics, Science/English.

OR

ii. Good passes in relevant
C & G Craft Certificate
AND

iii. Pass Entry Test and
Interview.

2. National Certificate/Diploma

i. A minimum academic entry
requirement of four
B.G.C.E. Ordinary level
subjects, four of which
are Mathematics, Physics
English and any other
relevant subject.

OR

ii. BTEC 1st. Certificate/
Diploma AND

iii. Pass Entry Test and
Interview.

E. Ad-hoc/Short Course : This depends on the nature of
the course. Normally a number
of years of experience in the
relevant trade is required.

GENERAL INFORMATION

(3) SECTION OF THE COLLEGE

Jefri Bolkiah College of Engineering has eight sections:-

Automotive
Electrical
English
Mechanical/Production
Refrigeration and Air Conditioning
Welding and Fabrication
Maths, Science and Computing
Ugama

(4) BRIEF DETAILS OF COURSES

Basic Engineering - General

This is a one-year foundation course for students intending to specialise in a C & G Craft Course in the second year.

In the first year students follow a uniform pattern, which allows them to sample the type of work done by the various sections so that they have a better understanding of the career they might wish to follow. At the same time, they receive basic training in practical work and engineering principles common to most trades.

The course is divided into 4 modules.

1. Fiting.
2. Machining
3. Welding and Fabrication
4. Electrical/Automotive.

Students spend 10 weeks on each module within different sections of the College.

At the end of each module and at the end of the year students performance is assessed. This and the student's personal choice are considered in offering the student on a certain Craft Course in the second year. It must be remembered that borderline students might have difficulty in getting a second year of their choice.

A local certificate is issued to students on passing the Basic Engineering Course.

Basic Engineering Course in Refrigeration and Air Conditioning

This course is specially designed by the Refrigeration and Air Conditioning Section for students who wish to proceed to the Craft Course in Refrigeration and Air Conditioning the second year. The subjects taught are more closely related to Refrigeration and Air Conditioning.

A local certificate is issued to students on passing the Basic Engineering Course in Refrigeration and Air Conditioning.

Craft Courses

The Courses lead to a City and Guilds of London Institute Certificate. The C & G of London Institute covers a wide range of craft courses. The objectives of these courses are to produce

semi-skilled workers and trained craftsmen and to provide an opportunity for those who wish to proceed to technician level studies.

At the end of the course students will sit the City and Guilds of London Institute examinations which are held twice a year, in May/June and December.

Approximately 60% of the training is done in workshops on practical work and the 40% covers the fundamental theory required to carry out the practical work.

Details of these courses are listed under the respective sections.

Technician Courses

These courses are validated by BTEC (Business & Technician Education Council, U.K.). The objectives of these courses are to provide a sound understanding of principles and practices for students to obtain an engineering specialisation and to provide students with the necessary foundation for further more advanced study.

At present students at BJCE may work towards 2 awards, the Certificate (3 years sandwich), and the Diploma (3 1/2 years sandwich). The total duration of the Certificate and Diploma Course includes two-six months period of industrial training.

Each of the 3 years is referred to as level I, II and III respectively. At each level, students have to take and pass a certain number of subjects or units. Assessment is continuous by means of phase tests, assignments and other forms of testing.

Starting from 1988, the structure of BTEC courses will change, in line with the new BTEC policy.

According to this new system, a student will be eligible for the award of the "First Certificate" or "First Diploma" upon successful completion of the first year. The second and third year will provide for specialisation and will lead to the award of the "National Certificate" or "National Diploma" at the end of the third year (The difference between Diploma and Certificate courses is that on Diploma Courses students take more units than on certificate courses).

Many students doing BTEC courses at JBCE are sponsored by B.S.P., B.L.N.G. or the Brunei Government.

Details of BTEC Courses at JBCE are listed under the relevant sections.

A. AUTOMOTIVE SECTION COURSES

ROLE OF SECTION

The Automotive Section covers all mechanical aspects of motor vehicles from cars to heavy transport. These include engines, gear transmissions, braking and electrical systems. They do not include bodywork.

The section has full garage facilities including pits, service bays, workshop areas and testing equipment for practical work, together with classrooms and demonstration areas for theoretical work. Much of the practical work, servicing, fault finding and repair, is done on ordinary working vehicles.

For successful students, there are good prospects of employment, although salaries and conditions vary. In the past good students have been known to start their own business.

It should be noted also, that there are opportunities for further studies aboard in this field for good students.

COURSES

1). BTEC - Duration of Courses

First Diploma in Agriculture Engineering - 1 year Course

National Diploma in Agriculture Engineering (This is a joint venture with Sinaut Agriculture Training Centre)- 2 1/2 years

First Certificate in Engineering - 6 1/2 weeks

2). Basic Engineering Trade Subjects - Rotation 10 weeks

C & G825 - 1 (Motor Vehicle Mechanic's Part One) - 1 year full time

C & G 825 - 2 (Motor Vehicle Mechanic's Part Two) - year full time

COURSE OBJECTIVE

- 1). To train the student to become a skill Motor Vehicle Mechanic (In Craft Level).
- 2). To provide understanding of the craft principles and technique relevant to the work in the Motor Vehicle Craft.

3). In addition to the technical subjects

a). English and

b). General Studies

are included in order to develop the students ability to absorb, interpret and transmit information whether in spoken or written form.

B. ELECTRICAL AND ELECTRONICS ENGINEERING SECTION

Roles of Section

This Section runs both craft and technician courses, as well as providing services to other sections in covering any electrical topics needed in other courses. The bias of the students are also taught to appreciate many aspects of electronics.

This section is well equipped with electrical laboratories and workshops. There are Electrical Installation Workshop, Electrical Winding Workshop, Basic Engineering Workshop, AC/DC Electrical Machines Drive Workshop, Electronic Workshop, Industrial Trainer Laboratory, Heavy/Light Current Laboratory, Microprocessor Laboratory, Drawing Room and Demonstration areas.

The majority of the students have employment prospects with both Government Departments and private sectors. There are also good opportunities for future studies in the field.

Courses

1). BTEC - Duration of Courses

Three Courses are offered under this award. There are:-

- 1). BTEC National Certificate in Electrical and Electronics Engineering

Duration of courses BTEC National Certificate are 2 years

- 2). BTEC National Certificate in Industrial Measurement and Control. (This is a joint venture with B.S.P. Co. Sdn. Bhd.)

3). First-Diploma in Engineering. (Electrical & Electronic bias)

To prepare students for entry to National Diploma in electricals & Electronics - 6 months (full time)

National Diploma in Electrical and Electronic (This is a new courses and will be running by 1st. August, 1992) - 2 1/2 years (full time)

This course is for applicant who completed form five with passes in English and Mathematic or Physics. Preference will be given to candidate with credit on the following subjects.

2). CRAFT - Duration of Courses

Duration of courses is 2 years

1st. year students will do a module of electrical subjects Basic Engineering Courses.

2nd. year students with a good performance in Basic Engineering Courses will be selected to do a one year full time course in C & G823 Electrical Installation Practice. There is a final examination and practical work assessment at the end of course.

This course is for applicant who passed form three with passes in english and Mathematic or Integrated Science.

3). TECHNICIAN - Duration of Courses

C & G 803 Pt. I, Pt. II and Pt. III 803 Electrical Engineering Technician.

Duration of Courses is 3 years full time.

This course is for applicant who completed form five with passes in English and Mathematics or Physics. Preference will be given to candidates with credit on the following subjects.

COURSES OBJECTIVE

The development and improvement of skills in work force, both upward and laterally, into a wider scope of jobs and trades.

The Incorporation of safety standards, policies and awareness in all our engineering training programme.

The Expedition of Bruneianization and Techology Transfer, using all the knowledge, experience and resources.

C. MECHANICAL AND PRODUCTION ENGINEERING SECTION

ROLES OF SECTION

Mechanical and Production Engineering Section is a newly formed section and is the largest in the College. It is formed by a merging of two sections, the Mechanical Engineering Section and the Production Engineering Section in July 1990. The section plays its roles in the College in training the students in various engineering fields at craft and technician level. Craft course conducted by the section including Metal Machining and Mechanical Fitting, while at technician level include BTEC National Certificate in Mechanical/Manufacture, BTEC National Certificate in Plant Engineering and Marine Engineering Class V Certificate. The Section also serves the Basic Engineering and BTEC First Certificate Courses.

The Section is equipped with modern machinery and laboratory equipment including CNC machines, simulators and metrology instrumentation.

COURSES

1). TECHNICIAN - Duration of Courses

BTEC N.C. in Mechanical/Manufacture - 2 years sandwich
BTEC N.C. in Plant Engineering - 2 years sandwich
Marine Engineering Class V Certificate - 2 years sandwich

2). CRAFT - Duration of Courses

C & G 821 Metal Machining I - 1 year full time
C & G 821 Mechanical Fitting I - 6 months full time

COURSES OBJECTIVE

All the courses offered are meant to provide the students with skills in engineering field either in craft level or technician level. It is also designed to enhance the students' knowledge in engineering and ability especially in Mechanical and Production Engineering.

D. REFRIGERATION AND AIR CONDITIONING SECTION

ROLES OF SECTION

This section runs its own Basic Courses in Refrigeration and Air Conditioning and City & Guilds 827 Craft Courses in Domestic Refrigeration and Air Conditioning and Industrial Air Conditioning.

This section has comprehensive facilities to equip students with a wide range of knowledge and skills in the repair, installation and maintenance of refrigeration and air conditioning units.

COURSES

1). BTEC - Duration of Courses

BTEC National Certificate in Building Service Eng. -
2 years sandwich

2). CRAFT - Duration of Courses

Basic Refrigeration and Air Conditioning - 1 year full
time

C & G 827 Part I Domestic Refrigeration and Air
Conditioning - 1 year full time

C & G 827 Part II Industrial Air Conditioning - 1 year
full time

3). SHORT COURSES

Domestic Refrigeration & Air Conditioning - 3 to 6
month

COURSES OBJECTIVE

To provide the education and training necessary to enable the student to carry out his duties as a Refrigeration and Air Conditioning Mechanic or Technicians.

It should also be noted that there are opportunities for further studies abroad in this field for outstanding students after completed the courses at JBCE, in order to equip the student to a more challenging job in this field as a Refrigeration and Air Conditioning Supervisor, Engineer, Lecturer, Consultants etc.

E. WELDING AND FABRICATION SECTION

ROLES OF SECTION

This section runs the Welding and Fabrication courses and also as a service section for any engineering course with welding modules. The subjects is taught at both crafts and technical level.

The section has its own fabrication and welding workshops for practical work together with classrooms, drawing office, a mini library and an AVA room for audio visual lessons.

In the practical areas students receive instruction in sheet metal fabrication, gas and arc welding and flame cutting. Demonstrations are given of more advanced forms of welding.

At present job prospects are better for technician students than for craft students. Craft students obtain employment in the Naval Dockyard, Government Departments and private firms as welders. There is a need for welding inspectors and draughtsmen, and these tend to be recruited from technician students.

COURSES

CRAFT COURSES

First Year Students:

This section teaches the "Welding and Fabrication" modules of the Basic Engineering Course.

Second Year Students:

City and Guilds of London Institute 822 Welding.

This is one year full time course open to students who wish to specialise in welding. They must have passed the Basic Engineering Course with good marks in welding subjects.

The subjects studied include:

- Technical English
- Technical Drawing
- Mathematics
- Welding Theory
- Workshop Practice

TECHNICIAN COURSE/PROGRAMMES

Business and Technician Education Council

- National Certificate in Fabrication and Welding

This is a two years, sandwich course, consisting of two years spend at College and two-six months period in industry.

First Year Level 1

The successful completion of this level leads to the award of BTEC First Certificate

Subjects:

Engineering Fundamentals

Mathematics

Science

Information Technology Studies

Language and Communication Studies

Second Years (National I)

Subjects:

Mathematics

General and Communication Studies

Technical Drawing

Fabrication and Welding Technology

Workshop Practice

Third Year (National II)

Subjects:

General and Communication Studies

Mathematics including Computer Studies

Technical Drawing

Welding Science

Process and Materials

Non-Destructive Testing

Fabrication and Welding Technology

Workshop Practice

This section also provides teaching services in welding for the following courses;

BTEC in Plant Engineering

C & G Refrigeration Courses

COURSES OBJECTIVE

CRAFT COURSES

The objectives of this courses are to develop students into semi skilled workers, to produce trained craftsman and to provide opportunities to proceed to Technician Level Studies.

TECHNICIAN COURSES

To provide a sound understanding of principles and practices for students to develop an engineering specialisation and to provide students with the necessary basic for further formal study.

F. MATHEMATICS AND SCIENCE/COMPUTER SECTION

ROLES OF SECTION

This section serves all courses for the teaching of Mathematics and Science. Staff also teach technical drawing to technician courses at first year level.

This section is equipped with computers, enabling to teach the computer components "Use of Computers" and BASIC Programming for all technician courses.

COURSES

BTEC - Duration of Courses

BTEC National Certificate in Computer Studies National I -
1 year

BTEC National Certificate in Computer Studies National II -
1 year

COURSES OBJECTIVE

To prepare young Bruneians with skills and knowledge to become immediately effective to take up computing positions in Government, Business and Industry.

To give students a basic qualification that will allow them to proceed for higher qualifications in Brunei and abroad

INSTITUT TEKNOLOGI
BRUNEI

6. INSTITUT TEKNOLOGI BRUNEI

(1) INTRODUCTION

In November 1980, the Director of Education submitted a proposal to the government calling for the establishment of Institut Teknologi Brunei. He suggested that such an institution be created to expand the provision of technical education in Brunei Darussalam. A little less than two years later in February 1982, the proposal was accepted by the government. As the physical establishment of the Institute was expected to take some time to complete, Pusat Latihan Teknikal Brunei was developed and expanded as an embryo for the Institute. Towards the later stages of its establishment in October 1985, the Institute was assisted by Leeds Polytechnic in the development of its curriculum, secondment of staff, procurement of books and equipment, and recruitment of contacts staff in the United Kingdom. Less than five months later, the Institute took in its first intake of students.

The primary objective of the Institute is to cater for a range of interests in technical and commercial education. In order to meet this objective, the Institute continually seeks close links with employers in both the public and private sectors with the purpose of determining their training needs and the appropriateness of the courses provided. Related to this objective is the Institute's goal to train provided. Related to this professionally competent, inspired and dedicated towards personal growth and service to the nation.

More specifically, the objectives of Institut Teknologi Brunei are:

- to prescribe courses of study and training in such branches of learning as it may deem fit in science, technology, commerce and arts in accordance with national and personal needs.
- to award Higher National Diplomas (HND), Diplomas, Certificates and other academic distinctions to persons who have been admitted to the Institute and who have satisfied its prescribed regulations.
- to provide continuing education and extended academic service to the community
- to provide and promote research and to seek practical solutions to contemporary issues
- to co-operate with other institutions and public authorities in such a manner and for such purposes as it may determine

Institut Teknologi Brunei is situated on the same grounds as Maktab Teknik Sultan Saiful Rijal (MTSSR) and the Nursing College. The library computing resources, and recreational facilities are shared by the Institute and MTSSR.

The Institute has three well-established departments: the Business and Management Department, the Computing and Information Systems Department, and the Electrical and Electronic Engineering Department. Given the size and nature of the Institute, there is a considerable amount of interaction between all departments.

All the departments in the Institute offer Higher National Diploma (HND) courses. The Business and Management Department also offers a Higher National Certificate (HNC) course, and the Electrical and Electronic Engineering Department also offers courses for the first two years of the Bachelor in Engineering programme which is conducted jointly by the University of Glasgow and Universiti Brunei Darussalam.

As part of the expansion programme and in line with the needs of the Bruneian community, the institute intends to expand the engineering provision to include programmes in civil and mechanical engineering. More immediately, however, the Electrical and Electronic Engineering Department will offer a part-time HND course in electrical and electronic engineering for Information Systems Department also plans to introduce a in the not too distant future.

(2) DEPARTMENT OF BUSINESS AND MANAGEMENT

Introduction

Business and management courses aim to provide students with a broad-based education for a wide range of careers in business, finance and management administration. The courses have been designed to prepare students to meet the needs of the business community and government of Brunei Darussalam.

The Department offers a Higher National Diploma (HND) course, which was introduced in January 1986, and a Higher National Certificate (HNC) course, which was introduced in January 1988. Both these courses had received the approval of the Business and Technician Education Council (UK) prior to their implementation. As of 1988, HND and HNC students have had the option of specializing in either Accounting and Finance or Management during the last two semesters of their course.

Apart from offering HND and HNC courses, the Department also conducts short courses and offers consultancy services to the public and private sectors.

COURSE AIMS

The aims of the HND and HNC courses are to:

- provide students with a broad educational foundation for a range of careers in business, finance and administration
- develop in students the knowledge, understanding and skills which will enable them to make a positive and effective contribution to an organisation.
- enable students to cope with a rapidly changing environment
- provide a basis for the students' continuing education through academic, professional and vocational routes.
- use the local environment as a learning resource by putting the course in context with current situations in Brunei Darussalam

(3) DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

INTRODUCTION

Electrical and electronic engineering courses aim to prepare students for a wide range of activities carried out by electrical and electronic engineering. Some of these activities include generating electrical power, commissioning and maintaining large electrical plants, operating sophisticated process control instrumentation, configuring and using computer systems, and operating and maintaining a wide range of communication systems. The Department is staffed by specialists in the above areas and it is well equipped to offer these courses at an advanced level.

The main teaching activities of the Department are concerned with the Higher National Diploma (HND) course on electrical and electronic engineering. This is a tertiary level vocational course and, as such, it primarily seeks to provide students with educational and training opportunities which will prepare them for careers as technician engineers. Students attending the course are also presented with opportunities to accept sponsorship arrangements with a number of important engineering organisations. Students qualifying from the course can look forward to challenging career opportunities in many government departments and private engineering organisations. Most employers offer excellent prospects of promotion and career advancement through further training.

Along with the HND course, the Department also offers all the engineering units of the first two years of the Bachelor of Engineering programme in electronics and electrical engineering which is conducted jointly by the University of Glasgow and Universiti Brunei Darussalam. The units are:

Electronic Engineering + Engineering Applications 1A
1)

Electrical Circuits

Electronics

Digital Systems

Engineering Electromagnetics

Engineering Applications 1B (year 2)

Students who complete these two years successfully continue their undergraduate studies in Glasgow. Apart from these two courses, the Department also has plans to introduce a part-time HND course and regularly conducts advanced short courses and research and consultancy work.

COURSE AIMS

The aims of the course are to:

- provide students with opportunities to gain a thorough basic knowledge of current electrical and electronic engineering practice and to acquire specialised knowledge in areas relevant to the engineering community of Brunei Darussalam.
- develop in students an understanding of the fundamental principles of engineering which will enable them to respond positively to the demands created by future changes in technology.
- offer students intellectual and social challenges to promote the development of skills and personal qualities essential to the world of work.

(4) DEPARTMENT OF COMPUTING AND INFORMATION SYSTEMS

INTRODUCTION

The Computer Studies programme offers a Higher National Diploma (HND) course, which was first introduced in 1986. The course has been accredited by the Business and Technician Education Council (UK) and its diplomates are exempted from the BCS Part I (UK) examinations based on their results. Since its introduction, the course has been redesigned to prepare its diplomates to meet the needs of the computing industry of Brunei Darussalam. The course is aimed at preparing students for careers as computer programmers, analyst programmers, and systems analysts.

The Department's future plans include the development of a part-time HND course; at present it also offers short courses and seminars on a consultancy basis to the public and private sectors.

COURSE AIMS

The aims of the course are to:

- prepare students for successful careers in the field of information processing
- develop in students the skills and knowledge that will enable them to make a positive and effective contribution to the computing industry in Brunei Darussalam.
- provide students with the background that will enable them to take advantage of future technological advances in the computing field.
- enable students to upgrade their qualifications at educational institutions, either locally or abroad.

(5) SUPERVISED WORK EXPERIENCE PROGRAMME

Aims

The supervised work experience programme aims to

- enable students to experience, at first hand, work in a real life setting

- provide the opportunity for the students to practise and enhance the skills they have acquired; develop in students the ability to apply the knowledge, understanding and skills which they gain from the course to their present and future experiences.
- promote in students the development of qualities of self-reliance and independence.
- enable students to utilise appropriate skills in the solution of real business problems.

Work Experience Procedures

Students are placed in a particular organisation only after they have been carefully assessed by the staff and after discussions have been held between the staff and prospective employers. The needs of the students and employers are matched as closely as possible so as to ensure that the work experience period will be beneficial to both parties.

Monitoring

An outline of a training programme is agreed upon by both the employee supervisor and the visiting tutor from the Institute. A detailed training schedule should be developed by the employee supervisor according to in-house requirements. This schedule will vary from employer to employer.

The progress and performance of each student will then be monitored by the visiting tutor, who will also be working closely with the employee supervisor. Any problems which might arise should be quickly identified and resolved so the supervised work experience programme can progress smoothly.

Recording

During the work experience period, the student will be required to maintain a daily log book and activity chart. Both of these should be checked and signed by the employee supervisor on a weekly basis and by the visiting tutor periodically.

At the end of the programme, the student will be required to write a report on his/her supervised work experience. The employee supervisor has the option of writing a confidential report (following a suggested format) on the student.

Assessment

Students are formally assessed by their supervised work, experience tutors at the end of the work experience period. All students' performances will be classified as being either Satisfactory or Unsatisfactory. The classification is determined after the supervised work experience tutor have met with each student, the student's supervisor and the visiting tutor. Under normal circumstances students can expect a classification of Satisfactory as all students' performance would have been monitored throughout the supervised work experience period so as to ensure a successful programme.

SULTAN SAIFUL RIJAL
TECHNICAL COLLEGE

SULTAN SAIFUL RIJAZ
TECHNICAL COLLEGE
BRUNEI DARUSSALAM

(1) A. DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

The Department of Electrical and electronic engineering offers full-time courses in Electrical and Electronic Engineering, electronics, Telecommunications, Electronics Servicing, Telecommunication and Electronics Mechanics and Short courses in Electrical Engineering. The courses lead to the awards of Business and Technician Education Council (BTEC) and City and Guilds of London Institute Certificates. Courses are designed to meet the ever increasing demands of Electrical and Electronics Technicians and Craftsmen in Brunei Darussalam as well as providing routes to higher qualifications such as Higher Diploma and B.Sc in Engineering.

Every effort is made to update courses and facilities to prepare students for current technologies and expertise. Industrial training is an integrated part of the Diploma and Certificate Courses and students are encouraged to obtain maximum benefit from their training.

The scope of each type of courses has been indicated in the pages which follow. Prospective students should consult the Head of Department on the suitability of the course on or before the time of enrolment.

LABORATORY FACILITIES

Laboratory facilities are available for the study of Practical Electronics, Electrical Machines, Electrical Installation, Telecommunication Systems, Digital and Microprocessor Systems.

A well resourced Television Workshop is available to ensure skill development. The Department resources are updated regularly.

BUSINESS AND TECHNICIAN EDUCATION COUNCIL (BTEC), UNITED KINGDOM

The Department offers a range of programme leading to the awards of BTEC First Certificates, National Certificates and National Diplomas in Engineering. The course leading to the award of a Diploma has a broader spectrum of study than that for the award of a Certificate.

Programme Structure

Most courses include "standard" units devised by BTEC and widely used by colleges in the United Kingdom, the remainder are college-based and specific to the Department.

Appropriate units are selected so as to meet the need of industries in Brunei Darussalam.

Examinations

The responsibility for assessing students performance rests primarily with individual college. At validation, the assessing procedures to be adopted are approved by BTEC, which employ moderators who visit collages in order to ensure that the required standards are maintained.

A-1 ELECTRICAL AND ELECTRONIC SECTION

COURSES

BTEC FIRST CERTIFICATE IN ENGINEERING (NEW SCHEME)- ELECTRICAL

The course is of one year duration and is organised by the Department of Electrical and Electronic Engineering in close collaboration with the Department of Science, Mathematics and Mechanical Engineering.

Duration

Full-time attendance at College for six months followed by six months in industry.

Aims of the Course

- (a) To improve the prospects of students who have interest in working in engineering but lack the necessary entry qualification for the National Certificate and Diploma courses.
- (b) To provide students with work related skills as well as knowledge and modern technique.

Curriculum

Engineering Fundamentals
Mathematics
Science
Information Technology Studies
English Language

Entry Requirements

- (a) Completed Form V with 2 "O" Level in English and Mathematics.

- (b) Passed City and Guilds with credit in C & G 823 Electrical Installation Practice.

Awards

BTEC First Certificate in Engineering will be awarded to those students who successfully completed the programme. Students can then proceed to the National Certificate and Diploma courses in Engineering.

A-2 BTEC NATIONAL CERTIFICATE IN ENGINEERING (NEW SCHEME) - ELECTRICAL

Main study areas: Electrical and Electronic Engineering or Communications. This is a two year full-time course for persons who aspire to a technological career in Electronics or Communications.

Duration

Two years full-time including 6 months of industrial training.

Aims of the Course

- (a) To make students effective in immediate employment by developing vocational skills, knowledge and understanding.
- (b) To meet the normal vocational requirements of technicians.
- (c) To provide a basis for and to encourage progress to further study such as degree courses and BTEC Higher awards.

Curriculum

Main Area of Study: Electrical and Electronic Engineering

First Year (Level N2)

Mathematics
Electrical and Electronic-
Principles
Electronics
Microelectronic Systems
Engineering Applications of
Computers
Electrical Properties of Materials
Electrical Application

Second Year (Level N3)

Mathematics
Electrical and Electronic-
Principles
Electronics
Electrical Application
Electrical Drawing
Industry and Safety

A-3 ELECTRICAL SHORT COURSES

The above courses are conducted by the Electrical Section of the Department of electrical and Electronic Engineering. The courses are designed for employees of the electrical industry.

The objectives of the courses are to provide the basic electrical engineering skills required by present day industry. the course attendance is on a Block Release basis and is in 3 phases.

Duration

5 weeks full-time

Phase 1

Curriculum

Health and Workshop Safety
Electrical Theory and Practice
Mechanical Theory and Practice
Welding Theory and Practice
First Aid

Entry Requirements

Applicants must have completed Standard 5 of the Malay medium education or its equivalent.

Award

A Certificate of Attendance is awarded to each candidate at the end of the course.

Phase 2

Duration

5 weeks full-time

Curriculum

Electrical Theory and Practice
Welding Theory and Practice
Mechanical Theory and Practice

Entry Requirements

Application must have completed Phase 1 of the course.

Award

A certificate of Attendance is awarded to each candidate at the end of the course.

Phase 3

Duration

10 week full-time

Curriculum

Basic A.C. Theory
Power in A.C. Circuit
Transformer
Circuit Protective and Switching Equipment
Electrical Installation, Lighting and Drafting
Electrical Devices
Electrical Instruments and Measurements

Entry Requirement

Applicants must have completed Phase 2 of the course.

Award

A certificate of Achievement will be awarded to candidates who successfully completed the programme.

A-3 TELECOMMUNICATIONS SECTION

BTEC NATIONAL CERTIFICATE IN ENGINEERING (NEW SCHEME) -
COMMUNICATIONS

Main study areas: Electrical and Electronic Engineering of Communications. This is a two year full-time course for persons who aspire to a technological career in Electronics or Communications. The first intake to the course was in August 1989.

Duration

Two years full-time including 3 months of industrial training

Aims of the Course

- (a) To make students effective in immediate employment by developing vocational skills, knowledge and understanding.
- (b) To meet the normal vocational requirements of technicians
- (c) To provide a basis for and to encourage progress to further study such as degree courses and BTEC Higher Awards.

Main Area of Study: Communications

First Year (Level N2)

Mathematics
Analytical Mathematics
Electrical and Electronic Principles
Engineering Application of Computers
Electronics
Microelectronic System
Transmission Principles
Switching Systems
Industry and Society

Second Year (Level N3)

Mathematics
Transmission Principles
Electrical and Electronic-
Principles
Switching
Radio
Electronics
Broadcasting
Television

Career Opportunities

- (a) This Certificate is recognised and accepted by colleges in the United Kingdom and the Institute of Technology, Brunei as entry qualification to degree/higher diploma courses.
- (b) This Certificate qualification will allow students to make application for employment at various Government Departments and Private Industry.

Entry requirements

- (a) BTEC First Certificate, OR
- (b) GCE 'O' Level passes in English Language, Mathematics and a relevant Science subject or an equivalent qualification
- (c) Minimum age of 16 years.

Award

Upon successful completion of the programme, students will be awarded the BTEC Certificate in Engineering and a separate notification of performance listing the units studied and the area of specialisation.

(2). B. DEPARTMENT OF MECHANICAL ENGINEERING

B-2 BTEC NATIONAL DIPLOMA IN ENGINEERING
(ELECTRONICS AND COMMUNICATIONS)

CURRICULUM

Level 2

Mathematics
Microelectronic Systems
Computer Systems
Digital Techniques
Transmission Systems
Telephone Switching Systems
Radio

Level 3

Mathematics
Electronics
Microelectronic Systems
Digital Techniques A & B
Electrical and Electronic Principles
Transmission Systems
Telephone Switching Systems
General and Communication Studies.

Career Opportunities

As for BTEC National Certificate in Engineering (New Scheme).

Award

BTEC National Diploma in Engineering will be awarded to those who successfully completed the programme.

B-3 BTEC NATIONAL DIPLOMA IN ENGINEERING
(NEW SCHEME)

Main area of study : Communications

Duration:

Two years and six months including four months of Industrial Training and the course is in 4 phases.

Aims of the course

Same as BTEC National Certificate in Engineering.

Courses Structure

Phase 1 - Pre Diploma in Engineering

Duration: 3 months.

Entry Requirements

Four GCE 'O' Level at grades A, B or C, three of which must include English Language, Mathematics and a Science subjects OR an equivalent qualification.

Curriculum

Mathematics
English
Electrical Electronic Principles
Electronics
Introduction to Telecomms Systems

Students will be examined in all the subjects at the end of the course and only those students who meet the required standard will be allowed to proceed to Phase 11 (Level 11) of the Diploma course.

Phase 2 - Level N11

Duration: 11 months

Curriculum

Mathematics
Engineering Applications of Computers
Electrical and Electronic Principles
Microelectronic Systems
Electronics
Transmission Principles
Switching Systems
Industry Society
Radio

Phase 3 - Industrial Attachment

Duration: 4 months

Phase 4 - Level N111

Duration: 12 months

Curriculum

Mathematics
Electrical and Electronic Principles
Electronics
Microelectronic Systems
Transmission Principles
Switching Systems
Radio
Television
Project
Software Design Methods
Industrial Control and Instrumentations
Data Communications

Career Opportunities

As for National Certificate in Engineering

Award

BTEC National Diploma in Engineering will be awarded to students who successfully completed the programme.

B-4 **CITY AND GUILDS 221 TELECOMMUNICATION AND ELECTRONIC MECHANICS**
PART I - Conducted for Telecommunication Department Trainees

Duration

Two years full-time.

Aims of the Course

This course/scheme is intended for persons undergoing training or employed as technicians in the installations, maintenance or operation of telecommunication, electronic or data handling systems.

Its purpose is to provide a sound understanding of the techniques involved and the principles underlying them.

Curriculum

Part 1

Telecommunication and Electronic System
Practical Activities
General Studies.

Part 2

Core Studies and EITHER
Data Communication and Control System OR
Telephone Switching System OR
College Devised Option
Practical Activities
General Studies.

Part 3

College set syllabus.

Career Opportunities

This Certificate qualification will allow students to make application for employment at various Government

Departments and private industry especially those Departments which require employees with sound understanding of maintenance, installation and operation of telecommunication, electronic or data handling systems.

Award

Certificates are awarded to candidates who pass all components of the examinations. The Certificate indicates the level of examination as appropriate and the grade of performance for each component. Certificates awarded in association with college devised syllabus will record the fact and indicate the specialisation undertaken.

B-5 RADIO, TELEVISION AND ELECTRONICS SERVICING

COURSES

CITY AND GUILDS OF LONDON INSTITUTE COURSE 802 (CGLI 802) - ELECTRONICS SERVICING

The CGLI Course 802 is designed to meet the needs of craftsmen employed in the servicing of electronic equipment such as Television, Radio, Video Tape Recorders. A substantial amount of time is devoted to practical work in College Laboratories and Workshops. The course duration is 3 years full-time and is in three parts - Parts 1, 2 and 3.

Part 1 - Certificate (Course 802)

Duration

One year full-time.

Curriculum

Health and Safety
Electronic Systems
Electrical and Electronic Principles and Calculations
General Studies
Laboratory and Practical Assignments.

Entry Requirements

BJCE with credits in Mathematics, English, Science and Malay.

Part 2 - Certificate (Course 802)

Duration

One year full-time.

Curriculum

Electronic and measuring instruments (core studies)
Laboratory and Practical Assignments
Radio (AM and FM)
Television

Entry Requirements

Passed Part 1 of course 802.

Note:

Qualified Part 2 students are eligible to seek membership with the Incorporated Practitioners in Radio and Electronics (IPRE).

Part 3 - Certificate (Course 802)

Duration

One year full-time with 2 months of industrial attachment.

Curriculum

Television and Information Reception:

- Colour Television and Techniques
- Teletext System
- Satellite Television and Cable Television.

Video Recording and Playback:

- Electronic Systems and Operation
- Mechanical System and Operation
- Servo System and Operation.

Career Opportunities

Radio Television Brunei
Telecommunication Department
Civil Aviation
Brunei Shell Petroleum.

Further Education Opportunities

Appropriate BTEC courses.

Entry Requirements

Passed Part 2 of course 802.

Award

City and Guilds Certificates are awarded to candidates who pass all the components/examinations. The Certificate indicates the level of the examination and the grades obtained.

(3) C. DEPARTMENT OF MECHANICAL ENGINEERING

G-1 AUTOMOTIVE SECTION

MOTOR VEHICLE MECHANICS

Duration

Two and a half years full-time, to include a period of industrial attachment.

Aims of the Course

- a) Provides for further study of the relevant basic principles in automotive work.
- b) To cater for and to train students to acquire the skill in maintaining the motor vehicle.
- c) To prepare students for better employment opportunities in relevant fields.

Course Structure

The course provides for greater skills in maintaining the motor vehicles. It enables the student to pinpoint and rectify the common problems. The subject matter includes more theory, about 60% and practical work of 40%, where the students are exposed to the actual situation.

Curriculum

Engine Technology 1
Vehicle Work Technology 1
Motor Vehicle Electrical Technology 1
Technical Drawing 1
Mathematics 1
Motor Vehicle Science
Welding Technology and Practice
Fitting Technology and Practice
English
Ugama
Engine Practice 1
Motor Vehicle Electrical Practice 1
Vehicle Work 1

G-2 COURSES: MECHANICAL ENGINEERING SECTION

BASIC ENGINEERING (AIRCRAFT BIAS) - PHASE 1

Duration

Two years full-time.

Aims of the Course

The course is designed to enable the student to acquire a basic knowledge of engineering, having a bias towards aircraft engineering especially in the later stages of Phase 1.

Curriculum

The following subjects are taught at the Basic Aircraft Engineering Course.

Mechine Shop Practice
Workshop Technology and Engineering Materials
Engineering Drawing
Mathematics and Physical Science
English
Electrical Studies
Plant Engineering
Welding Theory and Practice
Piston Engine Studies
Vehicle Body Repair
Aircraft Familiarisation
Ugama.

Career Opportunities

Those students who are successful in passing Phase 1 will have the opportunity of being employed with EITHER Royal Brunei Airlines OR the Royal Brunei Armed Forces and continuing with their studies at MTSSR.

We will endeavour to find employment for those students who not successful in passing Phase 1.

Entry Requirements

The minium academic requirment approved by MTSSR.

Brunei Junior Certificate of Education with a Minium of FIVE credits in subjects including Mathematics, Science and English.

AND Any General Certificate of Education 'O' Level passes would be an advantage.

Physical Requirements

Subjects of His Majesty The Sultan and Yang DiPertuan of Brunei Darussalam between the ages 15 and 18 years with good physical fitness.

Male : Height - at least 5 ft. 2 in.
Weight - a minimum of 110 Ibs.

Female : Height - at least 4 ft 10 ins.
Weight - a minimum of 100 Ibs.

Award

Successful students will be awarded an internal Certificate approved in accordance with the standards of MTSSR: namely, the Basic Aircraft Engineering Certificate.

C-3 AIRCRAFT ENGINEERING SECTION

AIRCRAFT ENGINEERING COURSE - PHASE 2

Duration

Two years full-time inclusive of on-the-job attachment with prospective employers.

Aims of the Course

To train students to a technical knowledge level that will enable them to understand the general aircraft systems and maintenance practices and qualify them for continuation training with Royal Brunei Airlines OR the Royal Brunei Armed Forces on aircraft type maintenance for the Airframe/Engines Speciality.

Course Structure

Students will be sponsored by Royal Brunei Airlines OR the Royal Brunei Armed Forces.

In the case of the Royal Brunei Airlines, the students will be on a monthly notice of employment termination basis.

In the case of the Royal Brunei Armed Forces, the students will be required to enlist in the Armed Forces for a period of FIVE years, and would be re-categorised within the Armed Forces if he/she does not meet the minimum technical standards of the course.

The course is designed to give training in the following subjects:

Theory of flight

Airframe structures and repairs

Piston and gas turbine engines

Fuel, hydraulic, pneumatic and flying control systems

Aircraft hardware, material and processes

Helicopter transmission systems

Ground handling, safety and support systems

Aircraft electrical and instrument systems

Cabin atmosphere control system

Career Opportunities

Sponsorship by Royal Brunei Airlines OR the Royal Brunei Armed Forces assumes the students of full employment on satisfactory completion of the course.

Opportunities for advancement are excellent in an industry that requires many locally trained staff, and for personnel who show aptitude and initiative, the rewards are high.

Entry Requirements

Must have successfully completed Phase 1 of the Basic Aircraft Engineering Course and be accepted for sponsorship by EITHER Royal Brunei Airlines OR the Royal Brunei Armed Forces. This will also involve certain minimum medical standards.

The course will be continually updated to suit the changing needs of Royal Brunei Airlines and the Royal Brunei Armed Forces and due to the differing requirements of Royal Brunei Airlines and the Royal Brunei Armed Forces the two courses will be streamed separately.

The course will be continually updated to suit the changing needs of Royal Brunei Airlines and the Royal Brunei Armed Forces and due to the differing requirements of Royal Brunei Airlines and the Royal Brunei Armed Forces the two courses will be streamed separately.

Award

Successful trainees will be awarded an internal Certificate approved in accordance to the standards of MTSSR; namely, Specialised Aircraft Engineering Course (Phase 2).

Year 2

Engine Technology 2
Vehicle Work Technology 2
Motor Vehicle Electrical Technology 2
Technical Drawing 2
Mathematics 2
English 2
Engine Practice 2
Vehicle Work Practice 2
Motor Vehicle Electrical Practice 2

The students are sent out on industrial attachment for two periods of 3 months per attachment. They are conducted at the end of the first and second years. Students are graded by assessment work. These is a series tests and the final result/mark is taken from the average of these tests.

Career Opportunities

Successful students will find it easy to obtain a job especially in the private sectors. Since there is a great increase in the car population in the state, a potential student could possibly open his own garage. A motor mechanic's work is always challenging. Those who wish to further their studies can also apply to take the City and Guilds of London Institute Courses in 825 Internal Combustion Engine and Vehicle Work.

Entry Requirements

Must have passed from 3 (BJCE) or an equivalent.

C-4 VEHICLE BODY REPAIR SECTION

CITY AND GUILDS 385 VEHICLE BODY CRAFT STUDIES PART - 2 - LIGHT VEHICLE BODY REPAIR

This course is to be phased in June 1991.

Duration

One and a half year full-time plus three months of industrial training.

Aims of the Course

Provides for a further study of the relevant craft principles in addition to the technical subjects. It also gives an appreciation of work conditions in the industry.

Course Structure

Provides for greater depth in the techniques of repairing vehicle bodies and a high degree of specialised craftsmanship.

Career Opportunities

There is a demand for vehicle body repair craftsmen, especially in the private sector. Successful students will have the capacity to act as supervisors in the industry.

Entry Requirements

A pass in Part 1 of the City and Guilds Course 385 Vehicle Body Craft Studies.

Award

Successful students will be awarded the City and Guilds 385 Vehicle Body Craft Studies Part 2 Certificate.

G-5 CITY AND GUILDS 398 VEHICLE BODY COMPETENCES
PART I AND PART II

Duration

One and a half year including six months of industrial attachment.

Aims of the Course

To train students to acquire basic skills in the repair and assembly of the vehicle body components.

Curriculum

Mathematics
English
Industrial Studies
Science
Technical Communication
Cleaning and Valeting
Vehicle Body Technology
Related Studies
Health and Safety
Vehicle Electro Technology
Welding Technology
Welding Practical
Workshop Practical
Ugama

Career Opportunities

This qualification and training will enable successful students to enter the motor vehicle body repair industry or enter the Part II of the City and Guilds 398 Vehicle Body Competences.

Entry Requirements

BJCE Certificate with passes in English, Mathematics, Science and Malay.

Award

Successful students will be awarded the City and Guilds 398 Vehicle Body Competences Part I Certificate.

G-6 CITY AND GUILDS 201 BASIC ENGINEERING COMPETENCES

This course replaces the City and Guilds 165 Welding Craft Practice Course which has been phased out. This new course will involve other sections in the College in terms of the teaching of theories and practicals. The Sections involved are:

1. Welding Section.
2. Mechanical Section.
3. Electrical Section.
4. Automotive Section.

Duration

One and a half year full-time, including six months of industrial attachment.

Aims of the Course

The aims of the scheme may be summarised as follows:

To enable students to acquire and demonstrate that they have acquired:

1. A knowledge of a range of jobs and careers within the engineering industry;
2. A basis for an informed assessment of their personal aptitudes and attitudes in relation to basic engineering competences;
3. A generalised practical mastery of the technology used in their practical tasks so that they may progress to other applications of it in new tasks or new training, without relearning;
4. A generalised practical mastery of the science background required for a proper understanding of the technology used in practical tasks, so that they may progress to other applications of it in new tasks or new training, without relearning;
5. An ability to perform competently practical tasks related to an engineering job;
6. The necessary competences in practical communications, task planning, doing and checking the results of work;
7. Confidence in a new, adult role.

Curriculum

Basic Engineering Technology
Fabrication and Welding Skills Tests.
Basic Fabrication and Welding Technology.

C-7 BASIC WELDING PRACTICE SYLLABUS

Course Objective

The principal Objectives of this course:

Course Objective

The principal Objectives of this course:

1. To promote adequate skill of Basic Welding Practice to the needs of a small workshop.
2. To promote an awareness of safety throughout the course with due concern to safety within industry

Entry Requirements

Passed BJCE level or working experience in engineering for two years.

Duration

Full-time attendance at College for one year. Followed by three months in industry.

Curriculum

1. Fundamental of welding.
2. Type of Welded Joints.
3. Identifying Welding Parts.
4. Safety in General.
5. Setting up and operating of gas welding.
6. Manual Metal Arc Welding.
7. Welding Practice in the different techniques and positions.

Award

A certificate of achievement/local certificate will be awarded to candidates who successfully completed the programme.

(4) D. DEPARTMENT OF CIVIL AND STRUCTURAL

The Department of Civil and Structural comprises the Brickwork, Construction and Surveying Sections which together conduct eight courses at three levels; viz. short courses, craft and technical courses.

The Technician level has courses which lead to awards of the first Certificate, National Certificate, Local Certificate or National Diploma Levels.

The Certificate Diploma to be awarded is endorsed internally by MTSSR, City and Guilds of London Institute (C & G) of Business and Technicians Education Council (BTEC) in the United Kingdom.

Selected students are enrolled into one of the above courses according to academic ability to ensure success in their studies.

Teaching is carried out mainly by classroom instructions, supplemented by vigorous programmes of site and industrial visits to assist with learning. Talks by specialists from industry of Government Departments are arranged where possible.

Practical work in the workshops, laboratory, draughting office and the fields are also emphasised and formed an integral part of all courses. The Department has well-equipped Brickwork Workshops, Materials Testing Laboratory, Draughting Office and a host of fairly sophisticated Surveying instruments and equipment.

Further expansion of practical facilities for training is envisaged and an Environment Science Laboratory will be set up in the near future.

In order to provide work related experience or exposure in an industrial setting, all courses include a compulsory element of industrial attachment which varies according to each course requirement.

Our courses will prepare students for eventual and gainful employment in the construction field and the work you will be involved with are in the profession of Bricklaying, Architectural, Building, Civil Engineering and Land Surveying.

The opportunity for advancement in the construction field is never better and offers unlimited scope for career advancement and job satisfaction. The work you will be doing in this field will be interesting, varied and challenging and there is opportunity for work indoors as well as outdoors. We welcome motivated students who are prepared to be trained for a career in the construction field.

For those who have good grades in our courses, further studies are possible, towards getting higher qualifications not available locally.

The Department has an impressive record of past students' success in getting Higher National Diploma Bachelor of Science degree qualifications in Building, Land Surveying or Civil Engineering, a testimony to the strong foundation of studies they had received at MTSSR.

The accompanying pages of information on courses will assist you in making your choice and we hope a plan of action to join us in future.

We will be pleased to provide more information if required an enquiries from all prospective students are always welcomed.

COURSES

D-1 BRICKWORK SECTION

PRACTICAL COURSE IN BRICKWORK

Duration

One and a half full-time, including six months' project work.

Aims of the Course

To train school-leavers become competent tradesmen capable of carrying at all aspects of the bricklaying trade in the building industry in Brunei Darussalam.

Curriculum

Most of the practical subjects in the City and Guilds Craft Course are also taught in this course and inclusive of:

Simple Building Drawing
Simple Building Calculations
Basic Craft Theory.

Career Opportunities

To be tradesmen in various Government Departments and the private sector.

Leading to City and Guilds Craft Certificate in Brickwork and Concreting will qualify for position as Junior Supervisor.

Entry Requirements

Completion of from 3 education and in possession of the School Leaving Certificate.

Award

The Local Certificate is awarded on the satisfactory completion and passing of the end of course examination.

D-2 CITY AND GUILDS OF LONDON INSTITUTE CRAFT CERTIFICATE
IN BRICKWORK

Duration

Two years full-time plus six months' industrial training.

Aims of the course

To train school leavers to become competent tradesmen capable of carrying out all aspects of bricklaying trade in the building industry in Brunei Darussalam.

Curriculum

The following subjects are taught concurrently in both the first and second year.

Brickwork
Concretework
Plastering
Wall and Floor tiling
Drainage
Setting out and the use of simple levelling device
Craft Theory
Building Calculations
Building Science
Technical Drawing.

Entry Requirements

BJCE qualification, Preference will be given to candidates with passes in Mathematics, Science and English.

Award

The City and Guilds of London Institute Craft Certificate in Bricklaying and Concreting is awarded on obtaining a minimum pass in each of the requisite parts of the examination.

CONSTRUCTION SECTION

D-3 BTEC FIRST CERTIFICATE IN CONSTRUCTION

Duration

Six months full-time plus three months' industrial training.

Aims of the Course

To provide an initial vocational qualification for those already in their chosen area of work with an opportunity to proceed to technician level studies at a later date.

Curriculum

Introduction to the Built Environment
Communication Process and Techniques
English Language and Communication
Mathematics
Science
Common Skills.

Career Opportunities

Students may proceed, depending on grades, to EITHER, the National Certificate OR National Diploma Construction courses.

Suitable for employment as a Trainee Technician in the architectural, building or quantity surveying profession within the construction field in both the private and public sector.

Entry Requirements

Completion of Secondary Education to form Five with passes at GCE 'O' Level in English, Mathematics or Science.

Award

BJCE First Certificate in Construction on Satisfactory completion of all units.

D-4 NATIONAL CERTIFICATE IN BUILDING STUDIES

Duration

One and a half year full-time, plus six months' industrial training.

Aims of the Course

To equip students with a sound basic understanding of the principles and a knowledge of construction and industry-based assignment work and self motivation.

Curriculum

Level 1

Introduction to the Built Environment
Common Skills A
Common Skills B

Level 2

Construction Science
Construction Technology
Materials in Construction
Mathematics
Site Surveying and Levelling
Organisation and Procedure
English as a Foreign Language

Level 3

Building Construction
Environmental Science
Measurement
Common Skills A Across all Level
Common Skills B

Career Opportunities

Students may seek employment as technicians or technical assistants in the architectural, building or quantity surveying profession within the construction field.

Students with the requisite grades may proceed to further studies leading to an HND Building qualification.

Entry Requirements

Completion of Secondary Education to Form Five with 3 Credits at grade C or above at GCE 'O' Level in English, Mathematics and Science and a pass in one other subject OR

Suitable alternative qualifications and/or experience in the Building industry.

Award

BTEC National Certificate in Building Studies on satisfactory completion of all units.

D-5 BTEC NATIONAL DIPLOMA IN CONSTRUCTION

Duration

Two years full-time, plus six months industrial training.

Aims of the Course

To equip students with a broad basic understanding of the principles and knowledge of construction and the industry based assignment and self motivation.

Curriculum

Level 1

Introduction to the Built Environment.

Level 2

Construction Science
Construction Technology
Materials Construction
Mathematics
Site Surveying and Levelling
Architectural Detailing
Organisation and Procedures
Structural Detailing
Mathematics B
English as a Foreign Language

Level 3

Building Construction
Civil Engineering Construction
Environment Science
Structural Mechanics
Design Procedure
Estimating and Costing
Measurement
Mathematics
Common Skills A ——— Across all level
Common Skills B ———

Career Opportunities

Students may seek employment as technicians or or technical assistants in the architectural, building, quantity surveying or civil engineering profession within the construction field in both the public and private sector.

Students with the requisite grades may proceed to further studies leading to an HNC, HND or a degree qualification in building, quantity surveying or civil engineering.

Entry Requirements

Completion of Secondary Education to Form Five with 4 credits (grade C or above) at GCE 'O' Level in English, Mathematics, Science, plus one other subject OR

Suitable alternative qualifications and/or experience in the building industry.

Award

BTEC National Diploma in Construction on satisfactory completion of all units.

D-6 BTEC NATIONAL DIPLOMA IN SURVEYING

Duration

Two years full-time, plus 3 months of industrial training.

Aims of the Course

To equip students with a sound basic understanding of the principles and a knowledge of land survey with special emphasis on modern technology by assignment work and self motivation.

Curriculum

Level 1

The Natural and Build Environment

Level 2

Surveying Practice
Cartographic Practice
Survey and Cartographic Technology
Planning and Environment
Mathematics
Physics
English
Map Studies
Statistical Techniques
Graphical and Visual Communication
Mathematics.

Level 3

Survey Practice
Photogrammetry
Mathematics B
Photo Interpretation
Survey and Cartographic Technology
Graphical and Visual Communication
Mathematics
Survey Project
Common Skill A > Across all levels
Common Skills B >

Career Opportunities

Employment at Survey Department, other Government Agencies, private survey and construction companies, and Brunei Shell.

Entry Requirements

Passes in 4 GCE 'o' Level subjects at grade A-C, two of which to include Mathematics, Physics or a Science subject.

Good knowlwdge of English Language OR
An Appropriate BTEC First Certificate.

Award

BTEC National Diploma in Surveying on successful
completion of all units.

E. DEPARTMENT OF BUILDING SERVICES

E-1 CARPENTRY AND JOINERY SECTION

Operating three types of courses:

City and Guilds 834 Carpentry and Joinery.
City and Guilds Advanced Part-Time.
Practical Carpentry and Joinery - short course.

The City and Guilds course is of two and a half year duration and has been in operation since the foundation of the school.

The syllabus covers work both in the workshop and on site, machine, technology, technical drawing applied science and calculation. During the second years students work on selected projects away from the school to gain industrial experience.

The practical course in Carpentry and joinery is for one and a half years. For the first half of the course students learn the basic practical skills together with the basic technical drawing preparing workshop rods. During the second half of the course they apply the skill they have gained on projects either on the College site or for other schools and Government Department.

CITY AND GUILDS 834 CARPENTRY AND JOINERY

Duration

Two and a half years full-time.

Aims of the Course

To train craftsmen in the use of hand and power tools, wood-working machines and equipment to produce modern and traditional items of furniture.

Curriculum

City and Guilds 834 course follows the syllabus laid down by the City and Guilds Examination Board and covers the following subjects:

Technical Drawing
Craft Technology
Mathematics
Science
Technical English
Ugama
General Studies

Career Opportunities

Successful completion of a City and Guilds course provides an opportunity to become a supervisor in a Government Department and private companies. There is also the possibility of further studies overseas.

1. Employment opportunities available in the Public Sector; Survey Department, Public Works Department Authority, etc., and in private sector; with land Survey and Construction companies.
2. Further educational opportunities are available in many countries for higher diploma, degree and post graduate courses for those wishing to pursue an academic career.

Entry Requirements

BJCE passes in Mathematics, Science and English.

Awards

1. City and Guilds 834 Craft Certificate will be awarded to students who pass all components of the examination conducted by the City and Guilds of London Institute.
2. On successful completion of the course, the students will be awarded with College Certificate.

E-2 CARPENTRY AND JOINERY PRACTICAL COURSE

Duration

One and a half years full-time.

Aims of the Course

To prepare the students for employment as an Artisan Carpenter.

Curriculum

The full-time practical course consists of Basic Carpentry and joinery, English and Ugama. Six months training on practical projects is included.

Career Opportunities

Successful completion of the practical course offers the chance to work with the Public Works Department, Hospitals, the Telecommunications Department and private companies and also to proceed to the City and Guilds Course 834.

Entry Requirements

Students should have already sat for the BJCE examinations. Priority will be given to those who passed the Woodwork subject.

Award

On successful completion of the course the students will be awarded the College Certificate.

E-3 CITY AND GUILDS 834 CARPENTRY AND JOINERY ADVANCED CRAFT

Duration

Two years part-time. Two days a week attendance.

Aims of the Course

To provide for deeper understanding of the craft process, technology and practice to broaden the knowledge of the total building process as required by the First Class Craftsman and Instructor.

Curriculum

The course follows the syllabus laid down by the City and Guilds Examinations Board and covers the following subjects:

Technical Drawing
Craft Technology
Mathematics
Science
Technical English
Ugama
General Studies.

Career Opportunities

Obtaining the Advanced Certificate, will enhance the student's chances of promotion and also will allow him to proceed to the Ordinary National Certificate and Diploma.

Entry Requirements

1. Should have obtained the Craft Certificate in Carpentry and Joinery with preferably at least one year of industrial experience.
2. Should have sufficient relevant industrial experience in excess of 1 above.

Awards

1. City and Guilds Advanced Craft 834 Certificates will be awarded to students who pass all components of the examination conducted by the City and Guilds of London Institute.
2. On successful completion of the course, the students will be awarded with College Certificates.

E-4 FURNITURE MAKING SECTION

PRACTICAL COURSE IN FURNITURE MAKING

Duration

One and a half years full-time.

Aims of the Course

To train craftsmen in the use of hand and power tools wood working machines and equipment to produce modern traditional furniture items.

Curriculum

The full-time practical course is a basic course consisting of twelve months of practical work on machines and workshop practice and six months of project work.

Some examples of furniture produced by students in their practical work are on display at the Department

The students renovated the conference room of the college.

Career Opportunities

Successful completion of the course provides a chance to work with the Furniture Division of the Public Works Department. This division is at present expanding and now they have a new workshop of modern design and incorporating a Wood Machining Section. The aim is for this plant to eventually design and make all the furniture for the various Government Departments.

Other students whose families are already engaged in private business will take their skills back and enable the private sector to develop. There is at present a scarcity of good quality furniture produced in the State.

Entry Requirements

Students should have sat for the BJCE examinations. Priority will be given to those who have passed the A Woodwork subject.

Award

The students will receive Certificate of Attendance.

E-5 CITY AND GUILDS 836 CABINET MAKING

Duration

Two and a half years full-time, including six months of industrial attachment.

Aims of the Course

To train craftsmen in the use of hand and power tools wood working machines and equipment to produce modern traditional furniture items.

Curriculum

The course follows the syllabus laid down by the City and guilds Examination Board and covers the following subjects:

Trade Theory
Technical Drawing and Geometry
Mathematics and Trade Calculations
Trade Science
Practical (hand and Machine work)

Career Opportunities

Successful completion of the City and Guilds course and the Craft Test provides an opportunity to students to become supervisors in Government Departments or the Public Works Department, Hospital the Telecommunications Department and private furniture making firms. There are also possibilities of further studies overseas.

Entry Requirements

BJCE passes in Mathematics, Science and English.

Award

The City and Guilds 836 Craft Certificate in Cabinet making.

E-6 PAINING AND DECORATING SECTION

CITY AND GUILDS 594 PAINTING AND DECORATING CRAFT

Duration

Two and a half years full-time, including six months of industrial attachment.

Aims of the Course

To provide a sound understanding of the painting craft processes, a knowledge and appreciation of techniques and materials which a craftsman will require in order to carry out his job with efficiency and understanding to provide for the enjoyment of art and self-expression.

Curriculum

The course is of two and a half years full-time. After the first year of training, students will do a six months industrial training before they resume their final year.

The course covers painting by brush, spray and roller surface preparation, types of materials, wallhangings tools, scaffolding and equipment. In addition to the technical subjects, general and industrial studies, an ability to absorb and transmit written or spoken communication is a valuable contribution to the students' general education and personal development.

Continuous assessment of practical work, with four technical assignments plus one assessment in Industrial Studies Assignment.

Career Opportunities

The construction industry offers a wide range of career opportunities and some ex-students are employed by the Public Works Department, The Royal Brunei Armed Forces, Radio Television Brunei, the Flotilla and private firms.

Entry Requirements

BJCE passes in Mathematics, Science and a good understanding of English.

Award

City and Guilds 594 Craft Certificate awarded by the City and Guilds of London Institute.

E-6/7 PRACTICAL COURSE IN PAINTING AND DECORATING

Duration

One and a half years full-time.

Aims of the Course

The course concentrates on practical training to prepare students for employment as Painter Artisans.

Curriculum

For the first nine months, the students will receive theoretical instructions and the last nine months they will work on practical projects.

Continuous assessment of ability will be done throughout the course. Those who satisfactorily completed the course will be examined for final grading.

Entry Requirements

Students should have sat for the BJCE examinations.

Award

Students will be awarded the Certificate of Attendance.

E-8 CITY AND GUILDS 594 ADVANCED CRAFT PAINTING AND DECORATING AND SUPPLEMENTARY STUDIES 600/1/05

This scheme is designed for trainee craftsmen decorators and follows the new syllabus for Advanced Craft Certificate 594. The workshop practice element in the first year of the course, will include and accommodate the skills of site experience.

Duration

A two-years part-time course with a minimum of 14 hours per week.

Aims of the Course

The course seeks to deepen the understanding of the Craft processes, technology and related science gained in the Craft Certificate course, to broaden the knowledge and understanding of the inter-relationship of the craft activities of the team concerned in the total building process and to introduce a study of job organisation. It aims also to develop further abilities in communication and responsible attitudes to work production and costs.

Curriculum

Specification
Site Procedures
Scaffolding
Decorative Treatment
Wallcoverings
Colour Texture and Form
Spray Painting
Assignments

Students will complete a minimum of three City and Guilds set assignments being part theory and part practical.

Students who successfully completed the course will entered as candidates for the City and Guilds Advanced Craft Certificate 594, and Supplementary Studies 600/1/05.

Entry Requirements

A minimum education qualification of the City and Guilds Craft Certificate in Painting and Decorating is normally required to enter this course and applicants will be required to have a good command of the English Language.

Award

City and Guilds 594 Advanced Craft Certificate in Painting and Decorating and Supplementary Studies 600/1/05.

E-9 PLUMBING AND PIPEFITTING SECTION

PRACTICAL COURSE IN PLUMBING AND PIPEFITTING

Duration

One and a half years full-time.

Aims of the Course

To prepare students for employment as pipefitters.

Curriculum

During the first six months, students will receive theoretical and practical instruction followed by six months industrial attachment. The final six months will be spent on preparing for examinations.

Continuous assessment of ability is done throughout the course.

Those who satisfactorily completed the course will be examined in order to receive final grading.

Career Opportunities.

As the building Industry is craft-based, even with the introduction of new methods and labour saving methods, the plumber will long be required and hence the prospects for a skilled craftsman are good.

Further Education Opportunities

Successful students may continue their studies at the City and Guilds 832 Level if they wish to do so.

Entry Requirements

Completion of Form 3 in either or English or Malay Medium education and be physically fit.

E-10 CITY AND GUILDS 832 PLUMBING AND PIPEFITTING

This scheme is designed for student craftsmen in countries with tropical and sub-tropical climates and is based on information from the countries involved.

As the course has a new revised syllabus, rapid changes in technology have been considered; therefore students are capable of appreciating new techniques as they are introduced.

Duration

Two and a half years full-time, including six months of industrial attachment.

Aims of the Course

The scheme aims to provide knowledge and appreciation of techniques and materials and an opportunity for advancement in the Construction Industry.

It also aims to train trainees to enable them to install and maintain domestic cold and hot water systems, water fittings, including baths, showers, flush toilets and drainage systems, gas appliances such as water heaters, gas cooker, etc.

Curriculum

The course at present runs on a full-time basis covering a minimum of 2,200 hours and includes:

Craft Theory
Craft Practice
Local Conditions, Regulation and Practice
Associated Subjects (Mathematics, Science, Technical Drawing)
General Studies

Students will be assessed continuously throughout the course.

Career Opportunities

As the building industry is craft-based, even with the introduction of new methods and labour-saving materials, plumbers will be required and hence the prospects for a skilled craftsman are always good.

Further Education Opportunities

Successful students may continue their studies overseas at the Advanced Craft Level.

Entry Requirements

BJCE passes in Mathematics, Science and a good standard of English.

Award

City and Guilds 832 Craft Certificate awarded by the City and Guilds of London Institute.

(5) F. DEPARTMENT OF SCIENCE

F-1 BTEC FIRST CERTIFICATE IN SCIENCE

Duration

Eight months full-time followed by 3 months of work experience OR

1 year part-time with 3 days attendance per week.

Aims of the Course

To provide a foundation for science based career and an opportunity to proceed to higher level studies.

Curriculum

Core Science
Mathematics
Language for Core Skills
Physics
Chemistry
Biology
Commons Skills Assignments

Career Opportunities

On successful completion of the course, students may proceed to the BTEC National Certificate in Science courses.

Entry Requirements

Completion of Form Five secondary education with passes at GCE 'O' Level in English, Mathematics and a Science subject.

Award

On successful completion of the course, students are awarded the BTEC First Certificate in Science.

F-2 BTEC NATIONAL CERTIFICATE IN SCIENCE

[There will be no further intake of students to this course as it is being replaced by the BTEC First Certificate in Science (see previous page) and the new BTEC National Certificate in Science (Subject to validation by BTEC)].

Duration

Two and a half years full-time including six months of work experience.

Aims of the Course

1. To provide a conceptual understanding of science and Mathematics with emphasis on laboratory techniques and organisation.
2. To instil an awareness of health and safety practices in the laboratory.
3. To develop confidence and a responsible attitude in working situations through work experience.
4. To develop effective communication in both spoken and written form.

Curriculum

- Level 1 : Biology
Chemistry
Safety and Laboratory Practice
Mathematics
English Language and Communication
- Level 2 : Biology
Chemistry
Physics
Laboratory Techniques
Mathematics
Audio Visual Aids
General and Communication Studies
- Level 3 : Laboratory/Techniques
Laboratory Organisation
Statistics
Use of Computers
General and Communication Studies.

Career Opportunities

Opportunity of employment or upgrading in schools, colleges, university, agriculture, Public World Dept. etc as a qualified Science Laboratory Technicians or the possibility of entering into higher level courses (such as the BTEC Higher National Diploma).

Entry Requirements

3 GCE 'O' Level passes in English, Mathematics and a Science subject OR

C & G 755 Science Laboratory Assistants.

Award

On successful completion of the course, the students will be awarded the BTEC National Certificate in Science.

F-3 BTEC NATIONAL CERTIFICATE SCIENCE

[Subject to validation by BTEC, this course will commence in August 1991].

Duration

1 year 8 months full-time including 4 months work experience.

Aims of the Course

1. To provide for the development of skills, knowledge and understanding which will enable students to be effective in employment.
2. To develop practical skills in laboratory techniques as well as in laboratory organisation and management.
3. To develop confidence and a responsible attitude in working situations through work experience.

Curriculum

Year 1 : Core Science
Mathematics
English as a Foreign Language
Physics
Chemistry
Biology
Using Computers
Common Skills Assignment

Year 2 : Physics
Chemistry
Biology
Laboratory Techniques
Laboratory Organisation and Management
Statistics
Common Skills Assignment

Career Opportunities

Employment or upgrading to qualified Science Laboratory Technicians or the possibility of proceeding to higher level studies such as the BTEC Higher National Diploma.

Entry Requirements

BTEC First Certificate in Science OR

4 GCE 'O' Level passes which includes English, Mathematics and a Science subject.

Award

On successful completion of the course, students will be awarded the BTEC National Certificate in Science.

F-4 **BTEC NATIONAL CERTIFICATE IN SCIENCE**
(MEDICAL LABORATORY SCIENCE)

[Subject to validation BTEC, this course will commence in August 1991].

Duration

1 year 8 months part time with 3 days attendance per week.

Aims of the Course

1. To provide for the development of skills, knowledge and understanding which will enable students to be effective in employment.
2. To develop practical skills in medical laboratory techniques.
3. To appreciate the importance of medical laboratory science to society.
4. To instil an awareness of health, safety and hygienic practices in the medical laboratory.

Curriculum

Year 1 : Core Science
Mathematics
English as a Foreign Language
Laboratory Techniques
Physics
Using Computers
Instrumentation
Common Skills Assignment

Year 2 : Medical Laboratory Science
Chemistry
Cell Biology
Biochemistry
Mammalian Physiology
Statistics
Common Skills Assignment

Career Opportunities

On qualifying, students will be eligible for employment or upgrading to Medical Laboratory Technicians status.

Entry Requirements

BTEC First Certificate in Science OR

4 GCE 'O' Level passes which includes English, Mathematics and a Science subject.

(6) G. DEPARTMENT OF MATHEMATICS AND COMPUTING

Aims and Objectives

1. To prepare students for professional employment in industry or commerce by providing them with a sound knowledge of Mathematics and the interest and ability to extend and apply it.
2. To help students to develop the basic mathematical knowledge and skills in their own sphere of learning so that they would be able to adopt these skills and manipulate in new situations.
3. To provide opportunities to students to identify, understand and develop the related mathematical concepts within the technical subjects in their particular course of studies.

Nevertheless, as a term, we all moving towards and searching for more appropriate approaches to the question.

"What is practical work in Mathematics within the framework of Technical Education?"

G-1 THE COMPUTER SECTION

The Computer Section came into being in January 1985. Initially it serviced other Sections in the College and conducted short courses for the College Staff.

The first BTEC Diploma intake was in August 1987. There is a great demand for this course from people working in computer-related field so satisfy their need a part-time Certificate course was started in August 1988.

The section also services other Departments for their BTEC needs and conducts courses in the use of Computers, Information Technology and Computer Appreciation.

The Section has written Student Allowance System and Student Recruitment System packages for use by the College Administration.

The Computing facilities include the IBM PC-XT microcomputers, the Apple Iie's and a Prime minicomputer and a recently installed Novel Networking IBM-PS2 System.

G-2 BTEC NATIONAL DIPLOMA IN COMPUTER STUDIES

Duration

Two years and three months full-time.

Aims of the Course

1. Provides students with the knowledge and skills to become immediately effective as junior employees in computer-related occupations.
2. Give students a basic qualification that will allow them to proceed to higher qualifications.
3. Make students aware of the broad social implications of the use of computer-based systems
4. Provide students with the fundamental knowledge necessary to appreciate future developments in computing.

Curriculum

Stage 1

Introduction to programming using PASCAL as a high level language.

Computer Systems.

Information Systems.

Quantitative Methods.

Communications Skills.

Stage 2

Programming Concepts.

Programming using COBOL as a high level language.

Programming Projects

Small Business Computer Systems (concepts and Practice)

Mathematics and Statistics

Career Opportunities

There is a great demand for computer personnel in private and government organisation. Successful students could get jobs as a trainee/junior programmers and computer operator.

Further Education Opportunities

Entry to BTEC Higher National Diploma in Computer Studies at ITB or overseas.

Entry Requirements

1. 4 GCE 'O' Levels including English and Mathematics, OR

2. Pre-BTEC course in Computer Studies, OR
3. Other equivalent qualification recognised by the College.

Award

BTEC National Diploma in Computer Studies.

G-3 BTEC NATIONAL CERTIFICATE IN COMPUTER STUDIES

Duration

Two years part-time.

Aims of the Course

1. Provides theoretical background necessary to enhance the experience of candidates working in the computer-related field.
2. Gives students basic qualifications that will allow them to proceed to higher qualification.

Curriculum

Stage 1

Introduction to programming using BASIC/PASCAL as a high level language
Computer Systems
Information Systems
Quantitative Methods
Communication Skills.

Stage 2

Programming Concepts
Programming using COBOL as a high level language
Programming Project
Quantitative Methods (Continuation of Stage 1)
Communication Skills (Continuation of Stage 2)

Career Opportunities

1. Junior/Trainee Programmers
2. Operators

Entry Requirements

An application must be working full-time in a computer-related field, AND have;

1. At least 4 GCE 'O' Level including Mathematics and English, OR
2. Other equivalent qualification and/or experience recognised by the College.

Award

BTEC National Certificate in Computer Studies.

G-4 COURSES

PRE-BTEC COURSE IN COMPUTER STUDIES

Duration

Five months full-time.

Aims of the Course

The course provides students with basic knowledge of computers, numeracy and English and prepares them for embarking on the National Diploma course in Computer Studies.

Curriculum

Principles of Programming
Programming using BASIC as a high level language
Hardware
Information Processing
Applications, e.g. Word Processing, spreadsheets
Mathematics
English

Further Education Opportunities

Entry to BTEC National Diploma in Computer Studies.

Entry Requirements

4 GCE 'O' Levels.

(7) H. DEPARTMENT OF BUSINESS AND MANAGEMENT

H-1 BTEC FIRST CERTIFICATE IN BUSINESS AND FINANCE

Duration

One year full-time.

Aims of the Course

1. To provide a foundation for students wishing to progress on to the National level course.
2. To develop knowledge and skills necessary to enable students to obtain employment in the business field, in either the private or public sector.

Curriculum

This consists of a common core of general business-related subjects with two option units. The option units initially will be key boarding and Finance. Students will undergo a period of work experience as an integral part of the course.

Entry Requirements

GCE Ordinary Level English or equivalent (satisfactory grade in College-devised English test).

Award

BTEC First Qualification in Business and Finance.

H-2 BTEC NATIONAL CERTIFICATE IN BUSINESS AND FINANCE

Duration

Two years full-time.

Aims of the Course

To develop the knowledge and skills necessary for students to obtain employment.

Curriculum

This consists of common core subjects and options in each year.

Year 1

People and Organisation 1
Organisation
Finance
Information Processing 1

Year 2

People and Organisation 2
Organisation and its Environment 2
Information Processing 2
Statistic

In both years there will be an element of business-related skills and students will undergo periods of work experience as in intergal part of the course.

Career Opportunities

1. Employment in private or public sector.
2. Progressing to higher level course.

Entry Requirements

At least 4 Ordinary level passes, one of which must be English OR

A Credit pass in the BTEC First Certificate course.

Award

BTEC National Certificate in Business Studies.

H-3 ASSOCIATION OF ACCOUNTING TECHNICIANS

Preliminary Stage

Intermediate Stage Each stage is of one year's duration

Final Stage

Aims of the Course

1. To provide a recognised qualification and membership body, for accounting technicians;
2. To give its members and students a corporate identity;
3. To serve and protect the interests of Members and Students;
4. To promote professional discussing amongst Members and with other interested parties.

Curriculum

Preliminary Examination

FOUR papers to be taken at one sitting

1. Basic Accounting
2. Communication

City and Guilds 856 Basic Food and Beverage Service.

H-3 **CITY AND GUILDS 706/2**
(COOKERY FOR THE THE CATERING INDUSTRY)

Duration

This a full-time course of approximately 18 months' duration with the emphasis being placed upon practical and theoretical work of an 'intermediate' standard. A smaller element of food service is also included.

Curriculum

The syllabus is set by the City and Guilds of London Institute and comprises:

1. Practical; by ongoing assessment.
2. Theory Paper 1; written objective paper (multi-choice).
3. Theory Paper 2; written short answers.

Course Content

Over 60% of the course involves practical kitchen work. This includes food production for the public restaurant as well as individual tuition in food preparation. Progress is largely dependent on extension of sound basic principles. In theory subjects, greater depth in cookery theory and introduction to food science are covered. An introduction to catering organisation and supervisory studies are also included.

Industrial Training

Throughout the course, students will take part in two separate six week periods of industrial training. Where possible, they will be placed in establishment of their choice with a view to possible future employment.

At this level, the student should be greater value to the establishment and work with the minimum of supervision.

Text Books

As students are expected to retain their books throughout their career, a future two text books are sold to them through the college. At this level the two books should cost approximately \$ 80.00.

3. Business Administration

4. Numeracy and Statistics.

INTERMEDIATE EXAMINATION

FOUR papers to be taken at one sitting

5. Accounting

6. Elements of Information System.

7. Business Law

8. Economic and Statistics.

Final Examination

FOUR papers to be taken at one sitting, in one of the following combinations:

ROUTE A (Accounting Practice Stream)

9. Financial Accounting

10. Cost Accounting and Budgeting

11. Analysis and Design of Information Systems.

12. Auditing and Taxation

H-4 BASIC CLERICAL/SECRETARIAL

Duration

Two years full-time.

Aims of the Course

To provide basic skills in and knowledge of receptionist/telephonist duties and/or clerical procedures, leading to further studies and/or employment.

Curriculum

Year 1

Shorthand (Elementary and Intermediate)
Typewriting (Elementary and Intermediate)
Communication in Business (Elementary)
Office Practice (Elementary and Intermediate)
Background to Business (Intermediate)
Book-keeping and Accounts (Intermediate)
Information Processing (Elementary)

Year 2

Shorthand (Intermediate/Advanced)
Typewriting (Intermediate and Advanced)
Communication in Business (Intermediate)
Secretarial Duties (Intermediate)
Background to Business (Intermediate)
Book-keeping and Accounts (Intermediate)
Information Processing (Intermediate)

Career Opportunities

Receptionists/telephonists, Junior Secretaries and Confidential Clerks. The employment rate of students upon completion of this course is 100%. Former students are now enjoying successful careers in both the public and private sectors.

Entry Requirements

Applicant must be in possession of 3 GCE 'O' Levels, one of which must be English (preferably Grade 5 or 6 or better).

Awards

Successful candidates will be awarded:

Secretarial Group Certificate of Pitman Examination Institute.

Basic Secretarial Group Certificate of Pitman Examinations Institute.

Basic Secretarial Group Certificate of Pitman Examinations Institute.

Single subject examinations of LCCI, RSA and PITMAN.

H-5 PRIVATE SECRETARY'S CERTIFICATE

Duration

Two years full-time.

Aims of the Course

To provide students with the necessary knowledge and skills to enable them to take up secretarial posts in middle and higher management.

Curriculum

Year 1

Students will follow the syllabus of the LCCI. There are FIVE compulsory components as follows:

(8) I. DEPARTMENT OF COMMUNITY SERVICES

I-1 CITY AND GUILDS 855 AND 856
(FOOD AND BEVERAGE STUDIES)

Duration

This is a full-time course of approximately 18 months duration and comprises the following:

1. City and Guilds 855: Basic Cookery (Overseas)
2. City and Guilds 856: Food and Beverage Service.

Aims of the Course

The primary aims of the course are to provide competent personnel in all aspects of the catering industry within Brunei Darussalam. This is a much wider field than most people imagine as, quite apart from the variety of work in Various government departments, it also includes aircraft catering - industrial catering (Shell, oil rigs and rapidly expanding contract catering) - Hotels and Restaurants - personal business - function catering, etc.

The above list is not exhaustive and the course enables the student to appreciate the economic usage of foodstuffs, correct purchasing and storage, food costings, hygiene and nutrition.

Curriculum

Both course syllabus are set by The City and Guilds of London Institute - a world recognised body for craft/trade and technical examinations.

Course Content: C & G 855 Basic Cookery

Approximately 50% of this course is practical kitchen work which include both Europeans and South East Asian Cookery.

Theory subjects include:

Catering Theory
Cookery Theory
Menu Planning
Food Costing
Safety and First Aid
Hygiene and Nutrition
Commodities
Kitchen Organisation, etc.

Course Content: C & G 856 Basic Food and Beverage Service

All students are trained our public restaurant up to 'silver service' standard. At least 50% of the time is spent in a practical work situation and can include attendance at outside government functions.

Industrial Training

It is important for students to gain realistic work experience at recognised catering establishments within Brunei Darussalam. Throughout this course students will take part in four separate months of 'industrial training'.

Uniform

Kitchen and Food Service uniform are provided by the government, as are kitchen knives, etc. However, students are expected to provide their own footwear for both kitchen and restaurant use. They will be advised of suitable types. In addition, students are expected to provide two clean tea towels at each practical kitchen session.

Text Book

As students are expected to retain their books throughout their career, these are sold to them through the College. At this level, two text books are required at a total of \$ 70.00.

Career Opportunities

Experience has shown that those students who are seriously intent on making a career in the catering industry have no difficulty in finding employment. We maintain a close liaison with Industry and, wherever possible, try to assist the student in finding initial employment.

Entry Requirements

1. Applicants should have successfully complete Form 3 of Secondary Education.
2. Have a satisfactory standard of spoken English and Comprehension.
3. Have a desire to work in a 'people oriented' industry.

Awards

On successful completion of the course, the students will be awarded;

City and Guilds 855 Basic Cookery (Overseas).

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