

## COURSES AND ENTRY REQUIREMENTS – SPM

To be eligible for admission to the various courses, all applicants must have the following grades in subjects taken at not more than two sittings of the SPM examination:

### B) SCIENCE & TECHNOLOGY COURSES (CONT'D) NGEE ANN POLYTECHNIC

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Aerospace Electronics <sup>B C E</sup> <u>Option:</u> Minor in Business Management	N75	3	a) Bahasa Inggeris (1119) b) Elementary or Additional Mathematics c) One of the following relevant Science subjects:	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6
Aerospace Technology <sup>B C E</sup> <u>Option:</u> Minor in Business Management	N65	3	Additional Combined Science Additional Science Biology Chemistry Combined Science	
Audio-visual Technology <sup>B D E</sup> <u>Option:</u> Minor in Business Management	N76	3	Design & Technology Engineering Science Integrated Science Physical Science Physics	
Biomedical Engineering <sup>B D</sup> <u>Option:</u> Minor in Business Management	N60	3	Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	

**Note:**

- B Applicants with severe vision deficiency should not apply for these courses.
- C Applicants with colour appreciation deficiency are not eligible to apply for **N64 (Diploma in Network Systems & Security)**, **N65 (Diploma in Aerospace Technology)**, **N75 (Diploma in Aerospace Electronics)** and **N82 (Diploma in Film, Sound & Video)**.
- D Applicants with colour appreciation deficiency may apply for and be admitted into these courses if they pass an in-house test.
- E Applicants with hearing deficiency should not apply for these courses.

**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
**NGEE ANN POLYTECHNIC**

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Biomedical Science / Biomedical Laboratory Technology <sup>A</sup>	N59	3	a) Bahasa Inggeris (1119)	A <sup>+</sup> to C/ 1 to 6
			b) Elementary or Additional Mathematics	A <sup>+</sup> to C/ 1 to 6
			c) One of the following relevant Science subjects:	A <sup>+</sup> to C/ 1 to 6
			Additional Combined Science	
			Additional Science	
			Biology	
			Chemistry	
			Combined Science	
			Engineering Science	
			Integrated Science	
			Physical Science	
			Physics	
			Science (Chemistry, Biology)	
			Science (Physics, Biology)	
			Science (Physics, Chemistry)	
			Science (Physics, Chemistry, Biology)	

**Note:**

A The first year of Biomedical Science and Biomedical Laboratory Technology is common to all students. Students interested in the Diploma in Biomedical Laboratory Technology must not suffer from colour appreciation deficiency. At the end of the first year, students interested in the Diploma in Biomedical Laboratory Technology will attend an interview to be conducted by the Department of Laboratory Medicine, National University Hospital. Students not selected for the Diploma in Biomedical Laboratory Technology course will remain in the Biomedical Science course.

**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
**NGEE ANN POLYTECHNIC**

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Business Information Technology	N61	3	a) English as 1 <sup>st</sup> Language b) Elementary or Additional Mathematics c) Any 2 other subjects	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6
			Note : To be eligible for selection, you must also have sat for at least one of the following subjects:  Additional Combined Science Additional Science Biology Chemistry Combined Science Computer Studies Design & Technology Engineering Science Food & Nutrition General Science Human & Social Biology Integrated Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	

**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
**NGEE ANN POLYTECHNIC**

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Chemical & Biomolecular Engineering  <u>Options:</u> • Pharma & Biopharmaceutical	N56	3	a) Bahasa Inggeris (1119) b) Elementary or Additional Mathematics c) One of the following relevant Science subjects:  Additional Combined Science Additional Science Biology Chemistry Combined Science Design & Technology Engineering Science Integrated Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6
Clean Energy Management <sup>B D</sup>	N84	3	a) Bahasa Inggeris (1119) b) Elementary or Additional Mathematics c) One of the following relevant Science subjects:  Additional Combined Science Additional Science Biology Chemistry Combined Science Computer Studies Design & Technology Engineering Science Integrated Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6
Electrical Engineering <sup>B D</sup>	N43	3		
<u>Options:</u> • Minor in Business Management • Electronics • Engineering Management • Power Engineering • Solar Technology				

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E Applicants with hearing deficiency should not apply for these courses.

**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
**NGEE ANN POLYTECHNIC**

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Electronic & Computer Engineering <sup>B D</sup>  <u>Options</u> <ul style="list-style-type: none"> <li>• Minor in Business Management</li> <li>• Aerospace Electronics</li> <li>• Computer and Communication Systems</li> <li>• Microelectronics</li> </ul>	N44	3	a) Bahasa Inggeris (1119) b) Elementary or Additional Mathematics c) One of the following relevant Science subjects: <ul style="list-style-type: none"> <li>Additional Combined Science</li> <li>Additional Science</li> <li>Biology</li> <li>Chemistry</li> <li>Combined Science</li> <li>Computer Studies</li> <li>Design &amp; Technology</li> <li>Engineering Science</li> <li>Integrated Science</li> <li>Physical Science</li> <li>Physics</li> <li>Science (Chemistry, Biology)</li> <li>Science (Physics, Biology)</li> <li>Science (Physics, Chemistry)</li> <li>Science (Physics, Chemistry, Biology)</li> </ul>	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6

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**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
**NGEE ANN POLYTECHNIC**

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Engineering with Business Management Programme <sup>B D F</sup>	N71	3	a) Bahasa Inggeris (1119) b) Elementary or Additional Mathematics c) One of the following relevant Science subjects: Additional Combined Science Additional Science Biology Chemistry Combined Science Design & Technology Engineering Science Integrated Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6
Environmental & Water Technology <sup>B D E</sup>	N74	3	<p>Note : To be eligible for selection, you must also have sat for at least one of the following subjects:</p> <p>Additional Combined Science Additional Science Biology Chemistry Combined Science Computer Studies Design &amp; Technology Engineering Science Food &amp; Nutrition General Science Human &amp; Social Biology Integrated Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)</p>	

**Note:**

- B Applicants with severe vision deficiency should not apply for these courses.
- D Applicants with colour appreciation deficiency may apply for and be admitted into these courses if they pass an in-house test.
- E Applicants with hearing deficiency should not apply for these courses.
- F Students applying for the **N71 (Engineering with Business Management Programme)** will spend the first semester doing the common modules as the four major engineering courses (i.e. Electronic & Computer Engineering, Electrical Engineering, Mechanical Engineering and Mechatronic Engineering). They will have one whole semester to discover their interest and affirm their decision. At the end of the first semester, they can apply to join one of the following nine engineering diploma courses with a minor in business management – Aerospace Electronics, Aerospace Technology, Audio-visual Technology, Biomedical Engineering, Electrical Engineering, Electronic & Computer Engineering, Marine & Offshore Technology, Mechatronic Engineering or Mechanical Engineering.

**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
**NGEE ANN POLYTECHNIC**

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Financial Informatics <sup>B</sup>	N81	3	a) English as 1 <sup>st</sup> Language b) Elementary or Additional Mathematics c) Any 2 other subjects	A <sup>+</sup> to D/ 1 to 7 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6
<p>Note : To be eligible for selection, you must also have sat for at least one of the following subjects :</p> <ul style="list-style-type: none"> <li>Additional Combined Science</li> <li>Additional Science</li> <li>Biology</li> <li>Chemistry</li> <li>Combined Science</li> <li>Computer Studies</li> <li>Design &amp; Technology</li> <li>Engineering Science</li> <li>Food &amp; Nutrition</li> <li>General Science</li> <li>Human &amp; Social Biology</li> <li>Integrated Science</li> <li>Physical Science</li> <li>Physics</li> <li>Science (Chemistry, Biology)</li> <li>Science (Physics, Biology)</li> <li>Science (Physics, Chemistry)</li> <li>Science (Physics, Chemistry, Biology)</li> </ul>				

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**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
**NGEE ANN POLYTECHNIC**

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Health Sciences (Nursing) <sup>G</sup>	N69	3	a) Bahasa Ingeris (1119)	A <sup>+</sup> to C/ 1 to 6
			b) Elementary or Additional Mathematics	A <sup>+</sup> to C/ 1 to 6
			c) One of the following Science subjects:	A <sup>+</sup> to C/ 1 to 6
			Biology	
			Chemistry	
			Combined Science	
			Food & Nutrition	
			General Science	
			Human & Social Biology	
			Physical Science	
			Physics	
			Science (Chemistry, Biology)	
			Science (Physics, Biology)	
			Science (Physics, Chemistry)	

**Note:**

G Applicants for **N69 [(Diploma in Health Sciences (Nursing))]** have to pass a medical examination and be free from physical handicap.

Due to the special requirements of the healthcare professions, all applicants for N69 have to pass a medical examination and be free from physical handicap to ensure suitability. Whilst not comprehensive, the following conditions will lead to non-acceptance into the course:

- active tuberculosis
- HBsAg positive
- legal blindness
- uncontrolled diabetes
- uncontrolled epilepsy
- uncontrolled asthma
- uncontrolled hypertension
- profound deafness
- psychiatric condition
- physical dependence upon mobility equipment
- acquired immune deficiency syndrome
- mobility restricted (hindering performance)

**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
**NGEE ANN POLYTECHNIC**

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Horticulture & Landscape Management	N57	3	a) Bahasa Inggeris (1119) b) Elementary or Additional Mathematics c) One of the following relevant Science subjects:  Additional Combined Science Additional Science Biology Chemistry Combined Science Design & Technology Engineering Science Integrated Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6
Information Technology <sup>B</sup> Options:  <ul style="list-style-type: none"> <li>• Business Management</li> <li>• Infocomm Sales &amp; Marketing</li> <li>• Mobile Business Application</li> <li>• Solutions Architect</li> </ul>	N54	3	a) English as 1 <sup>st</sup> Language b) Elementary or Additional Mathematics c) Any 2 other subjects  Note : To be eligible for selection, you must also have sat for at least one of the following subjects:  Additional Combined Science Additional Science Biology Chemistry Combined Science Computer Studies Design & Technology Engineering Science Food & Nutrition General Science Human & Social Biology Integrated Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	A <sup>+</sup> to D/ 1 to 7 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6

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**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
**NGEE ANN POLYTECHNIC**

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Leisure & Business Facilities Management <sup>BDE</sup>	N40	3	a) Bahasa Inggeris (1119) b) Elementary or Additional Mathematics c) One of the following relevant Science subjects:  Additional Combined Science Additional Science Biology Chemistry Combined Science Design & Technology Engineering Science Integrated Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	A <sup>+</sup> to C/ 1 to 6  A <sup>+</sup> to C/ 1 to 6  A <sup>+</sup> to C/ 1 to 6

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**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
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Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Marine & Offshore Technology <sup>BE</sup> <u>Options:</u> <ul style="list-style-type: none"> <li>• Minor in Business Management</li> <li>• Design</li> <li>• Oil &amp; Gas</li> </ul>	N42	3	a) Bahasa Ingeris (1119) b) Elementary or Additional Mathematics c) One of the following relevant Science subjects:	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6
Mechanical Engineering <sup>BE</sup> <u>Options:</u> <ul style="list-style-type: none"> <li>• Minor in Business Management</li> <li>• 6-month Internship Programme</li> <li>• Automotive Technology &amp; Motorsport</li> <li>• Biomedical Applications</li> <li>• Design Innovation</li> <li>• Environment &amp; Energy Systems</li> <li>• Precision Engineering</li> </ul>	N41	3	Additional Combined Science Additional Science Biology Chemistry Combined Science Design & Technology Engineering Science Integrated Science Physical Science Physics Physics (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	
Mechatronic Engineering <sup>BDE</sup> <u>Options:</u> <ul style="list-style-type: none"> <li>• Minor in Business Management</li> <li>• 6-month Internship Programme</li> <li>• Aerospace Applications</li> <li>• Automation &amp; Robotics</li> <li>• Micro Electromechanical Systems</li> </ul>	N50	3		

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**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
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Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Network Systems & Security <sup>B C M</sup>	N64	3	a) Bahasa Inggeris (1119) b) Elementary or Additional Mathematics c) One of the following relevant Science subjects: Additional Combined Science Additional Science Biology Chemistry Combined Science Design & Technology Engineering Science Integrated Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6
Optometry <sup>B</sup>	N83	3	a) Bahasa Inggeris (1119) b) Elementary or Additional Mathematics c) One of the following Science subjects:  Biology Chemistry Combined Science Engineering Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry)	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6

**Note:**

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M Applicants for N64 (**Diploma in Network Systems & Security**) who have successfully completed the Cisco Certified Network Associate (CCNA) course at the local secondary schools will be granted exemptions for the relevant modules if they pass a practical test on a module that is equivalent to their highest completed CCNA module.

**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
**NGEE ANN POLYTECHNIC**

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Pharmacy Science	N73	3	a) Bahasa Inggeris (1119)	A <sup>+</sup> to C/ 1 to 6
			b) Elementary or Additional Mathematics	A <sup>+</sup> to C/ 1 to 6
			c) One of the following relevant Science subjects:	A <sup>+</sup> to C/ 1 to 6
			Additional Combined Science	
			Additional Science	
			Biology	
			Chemistry	
			Combined Science	
			Engineering Science	
			Integrated Science	
			Physical Science	
			Physics	
			Science (Chemistry, Biology)	
			Science (Physics, Biology)	
			Science (Physics, Chemistry)	
			Science (Physics, Chemistry, Biology)	

**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
**NGEE ANN POLYTECHNIC**

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Real Estate Business	N48	3	a) Bahasa Inggeris (1119) b) Elementary or Additional Mathematics c) One of the following relevant Science subjects:  Additional Combined Science Additional Science Biology Chemistry Combined Science Design & Technology Engineering Science Integrated Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6
Sustainable Urban Design & Engineering	N89	3	a) Bahasa Inggeris (1119) b) Elementary or Additional Mathematics c) One of the following relevant Science subjects:  Additional Combined Science Additional Science Biology Chemistry Combined Science Design & Technology Engineering Science Integrated Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6

**B) SCIENCE & TECHNOLOGY COURSES (CONT'D)**  
**NGEE ANN POLYTECHNIC**

Course	Course Code	Duration (Years)	Entry Requirements	
			Subject	Grade
Veterinary Bioscience	N90	3	a) Bahasa Inggeris (1119) b) Elementary or Additional Mathematics c) One of the following relevant Science subjects:  Additional Combined Science Additional Science Biology Chemistry Combined Science Design & Technology Engineering Science Integrated Science Physical Science Physics Science (Chemistry, Biology) Science (Physics, Biology) Science (Physics, Chemistry) Science (Physics, Chemistry, Biology)	A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6 A <sup>+</sup> to C/ 1 to 6