



# **PALMERSTON NORTH BOYS' HIGH SCHOOL**

**YEAR 12 NCEA (Level 3)**

**YEAR 13 ADVANCED**

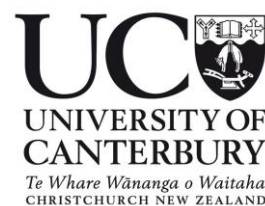
**TWO YEAR ACCELERATED**

**COURSE INFORMATION**

**2021**



**Massey University**



# Contents

Overall Course Policies	p2
Year 12 Course	p3
Year 13 Course	p5
PNBHS - University Papers	p8
Advice to Students	p16
Monetary Awards	p17
University - PNBHS Partnerships	p18
Present: - Gerard Atkin, Ken Benn - Senior Staff - Senior Students	} PNBHS

**Please feel free to ask questions at any time. Staff and students will be able to offer opinions and answers.**

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Accelerate Programme Coordinator  
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## OVERALL COURSE POLICIES

- This course is offered as an accelerated programme for academically able students, particularly those who intend to go to university. It is offered to those students in Year 11 who gain a high level of achievement in their NCEA Level 1 subjects and NCEA Level 2 subjects.
- Students who do not meet this requirement will be placed into an appropriate multi-level programme in consultation with the Accelerate Programme Coordinator.
- The Year 12 NCEA Level 3 and the Year 13 Advanced Course must be regarded as an integrated two-year programme involving study at NCEA Level 3 and at an advanced level consisting of study towards University 100 level papers and / or NZQA Scholarship examinations.
- Students entering the Year 12 -13 accelerate programme must have gained a significant number of Excellence grades in the previous year.
- Pre-requisites will also include at least a Merit average in subjects that are being taken to the next level.
- Students in Year 12 must enter five NCEA Level 3 subjects. Partial acceleration will need to be negotiated. They will not be able to enrol in university papers but, in exceptional cases, may enter the Scholarship examinations.
- Students in Year 13 must take the equivalent of five subjects at or in advance of NCEA Level 3. Students are advised to repeat no more than three subjects.
- Year 13 students will be encouraged to enter a minimum of three Scholarship standards. Students who repeat subjects will be expected to enter the Scholarship standard in those subjects.
- University papers offered by the school are available in selected subjects for students who have gained University Entrance. A maximum of four papers can be taken. In some cases, papers not offered by the school may be taken via distance learning.
- English or a “language rich subject” must be taken for at least one of the two years. However, it is strongly recommended that at least one language rich subject be taken to Level 3.
- The underlying expectation is that students will have the required ability and motivation to succeed to a high level, thus providing them with an academic advantage as they move on to university.

## YEAR 12 COURSE

### Subject Choices

- Students choose FIVE NCEA Level 3 subjects from the options:

<b>ARTS</b> Drama Music Studies Performance Music Art History Visual Art subjects (3 options)	<b>MATHEMATICS</b> Mathematics with Calculus Mathematics with Statistics Mathematics
<b>COMMERCE</b> Accounting Economics	<b>SCIENCE</b> Biology Chemistry Electronics Agriculture/Horticulture Physics Sports Science
<b>ENGLISH</b> English Media Studies	<b>SOCIAL SCIENCE</b> Classical Studies Geography History
<b>LANGUAGES</b> French German Japanese Maori	<b>TECHNOLOGY</b> Graphics
<b>PHYSICAL EDUCATION</b> Physical Education Studies	

- There are no restrictions. However, our **very strong recommendation** is that at least one 'language rich' subject is chosen. Suitable subjects include: Art History, Classical Studies, English, History, Statistics, Economics or a language.

**Note:** Some universities may require specific 'language rich' subjects to be taken at school for certain courses. If a student is contemplating study at an Australian university or some courses at the University of Auckland, level 3 English must be taken as well as Arts papers

- It is expected that the majority of students will be able to take the subjects of their choice.
- Any requests to take subjects other than those listed on the previous page must be discussed with the Accelerate Programme Coordinator.

### **Selected Classes**

- If possible, Year 12 NCEA Level 3 classes will operate where a sufficient number of accelerated students elect to take a particular subject.

For example, this year the following Year 12 NCEA Level 3 classes are operating:

Accounting	Biology
Chemistry	Classical Studies
English	History
Maths with Calculus	Maths with Statistics
Physics	

Where this is not possible, students will join Year 13 students in NCEA Level 3 classes.

### **Assessment**

- Students will complete the entire assessment programme for each subject they elect to take.

### **Alternative Accelerated Course**

- Under special circumstances, any variation to a five subject NCEA Level 3 course will be considered. In such cases the Deans will discuss the best possible options with individual students.

## YEAR 13 COURSE

### Subject Choices

- It is a requirement that all Year 13 accelerate students will undertake the equivalent of five subjects.
- It is expected that most students will select subjects from those listed on page 2. They may be new subjects or the same subject at an advanced level.
- Where it is possible, specific Year 13 Advanced Classes will operate in subjects that have sufficient numbers of students.

For example, this year advanced classes operated for:

Accounting*	History*
Biology*	Maths with Calculus*
Chemistry*	Maths with Statistics*
Economics*	Physics*
English*	

\* Subjects offering a University paper(s) this year.

- In subjects where specific advanced classes do not operate, students will undertake study in regular Year 13 classes.
- Students are expected to enter at least three Scholarship standards from the five subjects they are taking.
- The availability of any paper is subject to a minimum number of enrolments.

### Advanced Subject Assessment

- New Zealand Qualification Authority Scholarship examinations are expected to be taken by students who are repeating subjects. Some students may also wish to re-enter NCEA Level 3 assessments.

**Note:** Art and Graphics will be assessed by portfolio submission.

- An overview of the content and assessment of the University papers offered is described on the following pages.

## **PNBHS - UNIVERSITY PAPERS**

4

- Students wishing to enrol in these papers must have gained an average of a Merit grade in the corresponding NCEA Level 3 subject the previous year.
- Students enrolling in these papers are signed on as Massey, Canterbury, Victoria or Waikato students under the special Palmerston North Boys' High School - University Partnership Agreement.
- The papers are taught at school by school staff, but university requirements must be met. This includes completing any practical work on a university campus.
- University staff will undertake the summative assessment for each paper. Details for each paper follow.
- School assessment programmes supporting the papers must be completed for school reporting purposes and will be taken into account for school subject prizes and monetary awards.
- Students who are successful will not be required to pay the University course fees. However, they will need to purchase or hire the prescribed texts.
- Students enrolled in University papers will be required to pay a \$100 bond per paper which will be reimbursed upon the successful completion of the paper and sitting NZQA Scholarship examinations in November. Successful completion is considered the obtaining of a C- grade or higher. Furthermore, students who obtain a grade lower than C- for any paper, or who do not complete a paper, will be required to reimburse the school the cost of the paper. Students enrolling in University papers, and their parents, will be required to sign a contract outlining their acceptance of these conditions.
- Students will have access to online material (notes, previous semester tests, examinations and other material) through the school and university websites.
- Some subjects will require testing to be taken on-line.
- Semester I papers will be completed by the end of Term II. Terms III and IV are committed to Scholarship preparation.

- Students should seek information regarding any specific details regarding the papers they are interested in taking. The University websites will provide some answers:
  - Massey University – [www.massey.ac.nz](http://www.massey.ac.nz)
  - Waikato University - [www.waikato.ac.nz/study/unistart](http://www.waikato.ac.nz/study/unistart)
  - Victoria University - [www.victoria.ac.nz/study/programmes-courses](http://www.victoria.ac.nz/study/programmes-courses)
  - Canterbury University - [www.canterbury.ac.nz/study/qualifications-and-courses/](http://www.canterbury.ac.nz/study/qualifications-and-courses/)

### **UNIVERSITY DISTANCE LEARNING PAPERS**

- Notwithstanding any of the above, it is possible for papers not included in the PNBHS – University partnerships to be taken under distance learning arrangements. This will require the approval of the Accelerate Programme Co-ordinator, Mr. Benn.



# 100 Level Mathematics

## Content:

Linear equations, lines and planes in two and three dimensions. Linear transformations, vectors, matrices and determinants in two and three dimensions, eigenvectors and eigenvalues. An introduction to linear programming and complex numbers.

Functions of one real variable and their graphs. Differentiation, integration and differential equations including second order homogenous and non-homogenous, with applications to mathematical models. Introduction to power series, numerical methods, partial differentiation and conic sections.

## Assessments

		<b>Weighting</b>
1	Online Quizzes	12%
2	5 Tests	75%
3	1 Assignment	5%
4	Tutorial Work	8%

# 100 Level History

## **Prescription: (Provisional)**

An introductory survey course on the history of Medieval Europe examining the development and long term influence of its political institutions, society and culture.

## **Learning outcomes**

Students who successfully complete this course should be able to:

Demonstrate a broad knowledge of Europe in the medieval period (1200-1500) and political, social and cultural trends in this period.

Communicate a basic awareness of key past events in the medieval era.

Demonstrate understanding that this history is constructed from primary sources and gain some experience of the range of these sources and of the problems in reading and interpreting them.

Identify key historical debates on major topics in the medieval period and reliable historical interpretations.

Demonstrate basic skills in the dissemination of historical arguments using a variety of written, oral and digital media.

**Please note:** Learning Outcomes are subject to change until the beginning of the semester in which the course is delivered.

Assessment	Weighting
1 Oral/Performance/Presentation	15.0%
2 Written Assignment	20.0%
3 Written Assignment	25.0%
4 Exam (centrally scheduled)	40.0%

# 161.120 Introductory Statistics

## Content:

Topics covered include general principles for statistical problem solving; sampling and experimental design; techniques for extracting information from data; some practical examples of statistical inference; and the study of relationships between variables using regression analysis. The statistical computer software package Minitab is used for most of the statistical computations and graphical displays.

## Assignments:

Students are required to sit three short online mastery tests and to complete three projects.

## Assessment:

Component Description	Percentage of overall mark
1. Test 1	15
2. Test 2	15
3. Tutorial Assessment	20
4. Exam	50

# 100 Level Accounting

## Content:

An introduction to how accounting information is used for planning, monitoring and evaluating organisational performance.

## Learning Outcomes

- Explain the role of accounting information in an organisation.
- Apply generally accepted accounting practices.
- Analyse the management of liquidity and solvency in an organisation.
- Apply management accounting techniques to planning and short-term decision making.
- Interpret an organisation's financial performance and position.

Assessment	Weighting
1 Test	15.0%
2 Computer Programmes	15.0%
3 Written Assignment	20.0%
4 Exam (centrally scheduled)	50.0%

## 100 Level Economics

### Content:

The course examines the nature of the contemporary economic environment in which businesses operate and considers how economics can aid in business decision-making.

### Learning outcomes

- Describe and analyse market outcomes using the supply and demand framework.
- Identify and explain the main factors that influence the economic environment in which consumers and businesses operate.
- Use economic thinking to provide solutions to selected issues faced by businesses.
- Examine the economic basis for, and impact of, government intervention in markets.

Assessment	Weighting
1 Test	20.0%
2 Test	20.0%
3 Participation	10.0%
4 Test	20.0%
5 Exam (centrally scheduled)	30.0%

## 100 Level Biology of Cells

### Content:

Introduction to eukaryotic and prokaryotic cell structure and function, and the chemistry of life. The flow of information within cells and transmission of genetic information to progeny. in cell division  
A description of cellular mechanisms for creating genetic diversity and the control of gene expression. An introduction to molecular genetics and genomics.

### Practical Work Requirements:

10 laboratory sessions at Massey University (at times to be determined).

### Assessment:

- 20% Semester Test
- 0% On-line Assignments (compulsory for course completion)
- 25% Laboratory Tests
- 55% Final Examination

## 100 Level Chemistry

### Content:

This paper discusses the central role of energy dispersal in determining spontaneous physical and chemical changes. Fundamental bonding theories will be used to rationalise molecular structures. Transition intermolecular forces, atomic structure and properties of elements is emphasised, and modern methods and applications of chemistry will be used to illustrate these concepts.

### Practical Work Requirements:

12 laboratory sessions at Massey University (at times to be determined)

### Assessment:

- 20% Practical Work (10% lab tests, 10% lab work)
- 20% Semester Test 10% Mastery Tests and Peer wise
- 50% Final Examination

## 100 Level Physics

### Content:

This course covers non-relativistic mechanics, and wave motion, including kinematics and dynamics, fundamental conservation laws, rotational motion and oscillations, mechanical waves and an introduction to quantum physics.

### Learning Objectives:

- Identify and apply correct problem-solving techniques to problems in classical mechanics, fluid dynamics, and wave mechanics.
- Appreciate the role of calculus in physics and use it in problem solving.
- Demonstrate safe laboratory practise and develop skills in data collection, analysis and presentation
- Explore and test hypotheses about physical phenomena and communicate those ideas to a range of audiences

### Practical Work Requirements:

Block laboratory sessions at Victoria University which will incur a field trip fee for transport and accommodation.

### Assessment: (Exact weightings will be published in February 2020)

- Laboratory Reports
- Semester tests
- On-line Quizzes
- Final Examination



## ADVICE TO STUDENTS

The following points need to be considered when planning courses:

- It will not be possible to undertake more than four university papers. These papers are to be completed within the first semester of 2020. The second semester is to be used for scholarship preparation.
- Be aware of your total commitment to study and extra-curricular activities.
- Physics, Biology and Chemistry papers require you to attend laboratory sessions. There are usually 10 – 12 Chemistry and Biology sessions for each paper and they will take place in the evenings (6.00 – 9.00 pm). Physics requires you to attend a block course in Wellington at the start of the year which will incur a fee.
- If you are intending to enrol for Otago Health Sciences DO NOT enrol for Physics, Chemistry or Biology university papers. All others are permissible.
- Your Notes:
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## **MONETARY AWARDS**

### **PNBHS Internal Scholarships and Bursary Awards**

#### **For Year 13 students:**

- Awards will be based on the summative internal assessment and the school examinations in September each year.
- The top tier of students, as determined by the school, based on an aggregate of their results, will each receive \$1,250.00.
- The next tier of students, as determined by the school, based on an aggregate of their best three school subjects, will each receive \$750.00.
- These awards are made at the annual school prize giving in December.

#### **NZQA External Monetary Awards**

- NZQA Scholarships' individual and overall subject awards will be made:
  - Gaining one scholarship: \$500 'one-off' payment
  - Gaining two scholarships: \$1000 'one-off' payment
  - 1<sup>st</sup> in subject: \$2000 pa for three years (providing a 'B' average or higher is maintained throughout)
  - Gaining three scholarships: \$2000 pa for three years
  - Three scholarships (two outstanding): \$5000 pa for three years\*
  - Three or more scholarships with outstanding performance: \$10,000 pa for three years\*.

\* The number of students receiving these awards nationally varies annually at NZQA's discretion.

Further information on NZQA Scholarships can be obtained from the NZQA website - <http://www.nzqa.govt.nz/scholarship/awards.html>



## Palmerston North Boys' High School University Partnerships



**Massey University**



Palmerston North Boys' High School has established relationships with four of New Zealand's universities. Each year, a significant number of young men leaving PNBHS enrol at these institutions. These universities strongly support enhanced opportunities for accelerate students and have full confidence in Palmerston North Boys' High School to deliver the content of their courses.

Our relationships with a broad range of universities and their associated programmes offers our students a good exposure to the departments and academics of these institutions. It enables them to make informed choices when deciding on their post school tertiary study destination.