



Otumoetai College

Mathematics Department

National Certificate in Educational Achievement

Level 3 Mathematics with Calculus 2017 (L3CALC)

To the students:

AIM: To prepare students for Level 3 and 4 Calculus examinations.

The course consists of THREE External Achievement Standards and THREE INTERNAL Achievement Standards, with the option of a FOURTH INTERNAL Achievement Standard.

Achievement Standard	Topic	Credit value	Type of Assessment	Approx. Assessment Dates
AS91577 (3.5)	Apply the algebra of complex numbers in solving problems	5	External	Term 1 Week 6 Mar 6 - 10
AS91575 (3.3)	Apply trigonometric methods in solving problems	4	Internal	Term 1 Week 11 Apr 10 - 13
AS91573 (3.1)	Apply the geometry of conic sections in solving problems	3	Internal	Term 2 Week 3 May 15 - 19
AS91578 (3.6)	Apply differentiation methods in solving problems	6	External	Term 2 week 8 Jun 18 - 23
AS91587 (3.15)	Apply systems of simultaneous equations in solving problems	3	Internal	Term 3 Week 2 Jul 31 - Aug 4
AS91579 (3.7)	Apply integration methods in solving problems	6	External	Term 3 Week 8 Sept 11 - 15
AS91576 (3.4)	Use critical path analysis in solving problems	2	Internal	OPTIONAL To be arranged



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Your teacher and the Mathematics Department have the responsibility to help you to achieve to your full potential.

You have the responsibility to complete all set work to the best of your ability, to be in class on time, to meet all deadlines and to act and behave in a responsible manner so that you can achieve to your potential. Your behaviour in the class should not impact on the other people in the classroom.

RESOURCES:

Each student will be issued with a copy of Delta Mathematics by Barton et. al. and will be expected to purchase photocopies of Achievement Standard assessments revision units and are recommended to purchase a copy of Y13 Calculus Learning Workbook (ESA publications).

ASSESSMENT:

At the beginning of each unit you will be informed as to the form of assessment for the unit.

The approximate assessment dates are listed in the above table.

How will you be marked?

Assessments may be formative or summative.

Formative assessments, such as assignments or end of unit tests, are used to give an indication of areas of weaknesses and to give you an opportunity to improve on them before the summative assessment.

Summative assessments are used to determine your understanding of a section of work.

Formative assessments are **not** counted toward your final grade.

Summative assessments **are** recorded and determine your final grade and have to be sat on the specified day.

All assessments are **COMPULSORY**.

As previously mentioned there are two main types of assessment this year, internal and external.

At the beginning of each new section of work you will be informed as to the form of assessment.

For **externally** assessed achievement standards a **PROGRESS GRADE** will be reported on the College report as above. This will only be an indication of the level of achievement so far achieved. The final grade for external assessed standards will be gained in the external examination sat in November.

Remember **PROGRESS GRADES** are indicator grades **NOT** necessarily final grades.

Your **EXTERNAL** assessment grade will be determined by your performance in the end of year examination set by the New Zealand Qualification Authority.

College Examinations

Both College examinations are compulsory. The internally and externally assessed Achievement Standards are reported as previously mentioned.

Vocational Pathways

The Vocational Pathways provide new ways to achieve NCEA – the foundation for success in further education and the world of work. The pathways help students see how their learning and achievement is valued in the ‘real world’ by aligning the NCEA Assessment Standards including specific ‘sector-related’ standards with six industries:

- Primary Industries
- Services Industries
- Social & Community Services
- Manufacturing & Technology
- Construction & Infrastructure
- Creative Industries

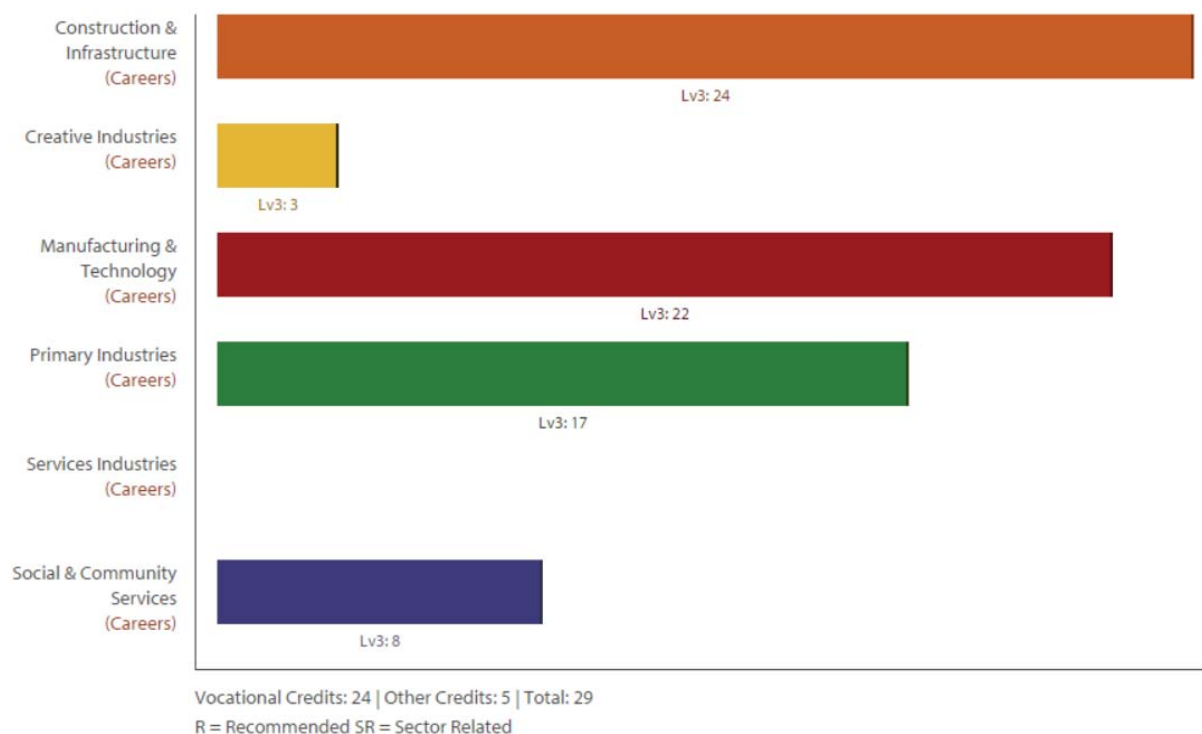
These six pathways represent ways to structure and achieve NCEA by providing a more coherent framework for foundational vocational education; students can develop their own individual education plans, are better informed and able to make better choices to meet their goals.

Government agencies, the industry training sector, secondary and tertiary representatives and industry and employer representatives worked together to develop the six Vocational Pathways for NCEA as the foundation of the journey to employment.

For more information on the vocational pathways, please visit

<http://youthguarantee.net.nz/vocational-pathways/>

This course provides access to the following credits on the vocational pathways framework



Recording marks

Your teacher will keep **ALL** assessed work for the external Achievement Standard in a safe place. Record your achievement grade on the record sheet held by your classroom teacher and on your own personal record sheet. These are your responsibility and your record. All externally assessed work will be returned to you prior to the external examinations.

You may be given assignments by your mathematics teacher to complete during each unit of work; you are expected to complete them. They will give you direct feedback on your understanding of what you have been taught.

Moderation between Classes

All assessments are common to all classes and have a common marking schedule. Inter-class moderation is achieved by check marking across the classes.

Samples of student work will be sent to NZQA to compare with student work from other secondary schools to ensure consistency of standards.

In the end-of-year school examination each teacher will be responsible for marking one complete question. This will give consistency in the marking.

Authenticity of Student Work

All work must be the student's own. If a staff member is in doubt the student will be asked to provide further evidence, orally or in writing, by explaining or solving a similar problem etc.

An inadequate explanation will result in no grade being awarded.

Appeals

If a student is not satisfied with a particular assessment result, the student must discuss it with the class teacher within 48 hours of the assessment being handed back. The assessment does not leave the classroom.

Students not satisfied with the discussion should approach the Head of the Mathematics Department (Mr Ellwood) as soon as possible, provided the assessment does not leave the room and is handed onto the Head of the Mathematics Department, by the classroom teacher.

Storage of Student Work

The College will keep all student work for internally assessed standards until such time as it is no longer required for moderation purposes.

It is expected of you to satisfactorily prepare yourself for each Achievement Standard Assessment through the guidance of your teacher.

Remember once a total of 80 credits have been achieved you are eligible to receive The National Certificate of Educational Achievement Level 3 but to do so you must have 60 credits at Level 3 plus 20 other credits from Level 2.

Satisfactory Completion of Course – Minimum Requirements

You are expected:

1. To attend class regularly. All absences from class, **for whatever reason**, will be recorded as an absence.
2. To have all necessary equipment – stationery, calculator, etc., to be able to participate fully in the classroom.
3. To complete all class work and assessment pieces as set by the classroom teacher.
4. To complete all set work on time.
5. To sit all assessments. Should you miss an **INTERNAL** assessment you will **NOT** be allowed to sit it at a later date

Note:

1. Should a class be missed, for whatever reason, you are responsible for catching up in your **own time**.
2. In the event of an absence for an extended period, you are expected to see the Head of the Mathematics Department, Mr Ellwood, and the Deans to discuss how you are to catch up on the missed work.
3. Sporting and Cultural Trips are not an excuse for work not being handed in on time. **Permission for extensions** should be sought in advance.
4. Any work completed on a computer should be backed up on a disc. Should a computer or printer malfunction the night before the work is to be handed in the disc will be evidence that it was completed on time. A hard copy will have to be produced at school that day from the disc.
5. These are minimum requirements and are designed to help you achieve to your potential.



J. Ellwood
HOD Mathematics
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