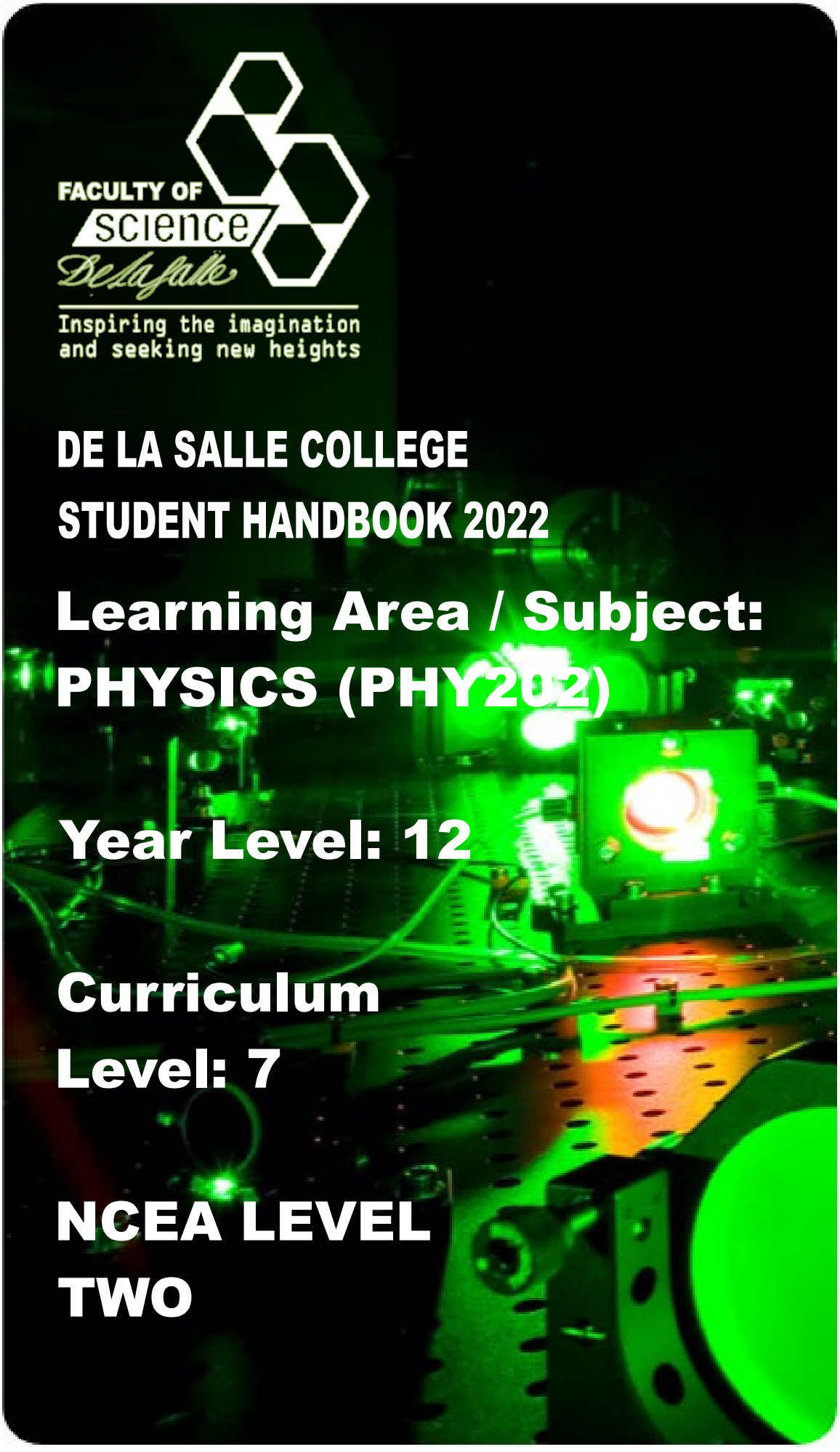

FACULTY OF science
Delasalle
Inspiring the imagination and seeking new heights

DE LA SALLE COLLEGE STUDENT HANDBOOK 2022

Learning Area / Subject: PHYSICS (PHY202)

Year Level: 12

Curriculum Level: 7

NCEA LEVEL TWO

FACULTY OF SCIENCE

De La Salle College, 81 Gray Avenue, Mangere East, Manukau City

De La Salle College
2022 YEAR PLANNER

COURSE: LEVEL 2 PHYSICS
PHY202

WEEK		1	2	3	4	5	6	7	8	9	10	11
DATE	24-Jan	31-Jan	7-Feb	14-Feb	21-Feb	28-Feb	7-Mar	14-Mar	21-Mar	28-Mar	4-Apr	11-Apr
TERM 1			AS91172(2.5) - Demonstrate an understanding of Atomic and Nuclear Physics.					AS 91171(AS2.4) Demonstrate an understanding of Mechanics				Easter

WEEK	1	2	3	4	5	6	7	8	9	10	
DATE	2-May	9-May	16-May	23-May	30-May	6-Jun	13-Jun	20-Jun	27-Jun	4-Jul	
TERM 2		AS91169(2.2) - Demonstrate understanding of physics relevant to a selected context.				AS91168(2.1) - Carry out a pracxtical investigation that leads to a non linear mathematical relationship.					

WEEK	1	2	3	4	5	6	7	8	9	10	
DATE	25-Jul	1-Aug	8-Aug	15-Aug	22-Aug	29-Aug	5-Sep	12-Sep	19-Sep	26-Sep	
TERM 3				AS 91171(AS2.4) Demonstrate an understanding of Electricity and electromagnetism						Senior Exam Week	

WEEK	1	2	3	4	5	6	7	8			
DATE	17-Oct	24-Oct	31-Oct	7-Nov	14-Nov	21-Nov	28-Nov	5-Dec		INTERNAL	EXTERNAL
TERM 4		REVISION		NCEA Exams begin				NCEA Exams end			

De La Salle College

Tue. 23 Nov 2021

Science

PHY202 Assessment Statement 2022

Course is endorsable

Year : 12 | Course : Physics | Mr A Kumar | Total Credits : 22

Pre Requisites
12 credits in L1 Science including a pass in Mechanics external.

Additional Requirements
Scientific Calculator
Workbook cost $10

No	Standard Number	Version	Level	Credits	Lit / Num	Full Title	Method of Assessment	Assessment Opportunities Offered	Approximate Date	Grade	Teacher Signature
1	91168	2	2	4	Num L1 Lit	Physics 2.1 - Carry out a practical physics investigation that leads to a non-linear mathematical relationship	Practical	1	Week 6 Term 2		
2	91169	2	2	3	L1 Lit	Physics 2.2 - Demonstrate understanding of physics relevant to a selected context	Assignment	1	Week 4 Term 3		
3	91172	2	2	3	L1 Lit	Physics 2.5 - Demonstrate understanding of atomic and nuclear physics	Test	1	Week 6 Term 1		
4	91171	2	2	6	Num L1 Lit	Physics 2.4 - Demonstrate understanding of mechanics	Exam	External	Term 4		
5	91173	2	2	6	Num L1 Lit	Physics 2.6 - Demonstrate understanding of electricity and electromagnetism	Exam	External	Term 4		

School Assessment Procedures - You can view your rights and obligations in the school's assessment procedures in the **Student Assessment Handbook**

Record your internal grades and ask your teacher to sign it off as correct. You can then use this as evidence of your achievement.

2022 COURSE OUTLINE YEAR 12 PHYSICS (PHY202)

Subject: Physics **NCEA Level:** Two

Entry Requirements: a minimum of 12 credits from NCEA Level One Science and Mathematics

Number of credits gained: 22

Method of assessment:

- Both internal and external assessment
- Internal assessments are given after a series of mock practice runs
- Mock externals at the end of each unit of work
- Practical Test: Summative or Formative practical tests.
- Mid-Year Examinations
- Preliminary Examinations

Looking Ahead:

- Level 3 Physics ,Tertiary level study, A diverse range of careers stem from Physics - e.g. Teacher, Meteorology, Pharmacy, Electrical, Electronic, Engineering, Pilot etc

Course Description

Course aims:

This course is aimed at those students who have achieved well in Year 11 and who know that they wish to pursue a career that requires Physics. Such careers include engineering, Electronics, Electrical, Meteorology and much more. The course consists of Achievement Standards from the Level 2 Physics course.

Course learning outcomes:

- To be able to take measurements of physical quantities and analyse data graphically to determine a relationship.
- To be able to describe and explain wave phenomenon and use formulae to calculate characteristic of waves
- To be able to describe and explain the behaviour of light in reflection, refraction and interference and use formulae to calculate quantities associated with the reflection and refraction of light
- To be able to describe and explain accelerated, projectile, relative and circular motion and use formulae to calculate quantities associated with above.
- To be able to describe and explain the effects of forces and momentum and use formulae to calculate quantities associated with force and momentum.
- To describe and explain the effects of energy transformation and conservation and calculate energy.
- To describe and explain effects of electric fields and direct current electricity in series and parallel circuits and use formulae to calculate electrical quantities associated with electric fields and dc circuits.
- To describe and explain electromagnetic phenomena and use formulae to calculate electromagnetic quantities.
- To describe and explain the structure of the atom and radioactivity.
- To describe and explain physics phenomena in unfamiliar contexts use formulae to calculate physical quantities in unfamiliar contexts.
- Explain the models of the atom
- Explain the properties of the nuclear radiations and calculate the energy in fusion and fission.

2022 Course Assessment Statement – Y12 PHYSICS (PHY202)

HOW WILL I BE ASSESSED IN THIS SUBJECT?

Achievement Standard	Curriculum Level	Level and Credit Value	Internal or External Assessment	Brief Description	My Prelim Grades	My Final Grades for Internals
AS91168 (**AS 2.1)** Carry out a practical physics investigation that leads to a non-linear mathematical relationship.	7	Level 2 4 credits	I	Carrying out a practical physics investigation which leads to non- linear relationship.		
AS91169 (AS 2.2) Demonstrate understanding of Physics relevant to a context	7	Level 2 3 credits	I	Research task which allows students to look at application of Physics concepts and ideas to a context.		
AS91171 (AS 2.4) Demonstrate understanding of mechanics	7	Level 2 6 credits	E	Motion, kinematics, projectiles, circular motion, force, acceleration, momentum, energy		
AS91172 (AS 2.5) Demonstrate understanding of atomic and nuclear physics	7	Level 2 3 credits	I	Models of the atom, nuclear transformation and products, nuclear reactions,		
AS91173 (**AS 2.6)** Demonstrate understanding of electricity and electromagnetism	7	Level 2 6 credits	E	Concepts related to Static electricity, DC Circuits and Electromagnetism		

De La Salle College – Physics PHY202 - Year Planner 2022

Subject: 12 Physics Teacher in charge: Mr. Ajinesh Kumar Year Level: 12 Curriculum Levels: 7

Unit Title: AS91168 (AS 2.1) Physics Internal – Carry out a practical physics investigation that leads to a non-linear mathematical relationship **Achievement objectives:** • Develop a procedure to gather data • Demonstrate procedure in processing data • Be able to interpret data. **Learning outcomes/skills:** • Able to carry out an investigation to collect data between two variables • Draw graphs of two variables • State the type of relationship between two variables **Assessment tasks/method:** • Correct use of a measurement skills to determine accurate values • Plotting points accurately to get a graph. • Stating the relationship between graphs **Key competencies:** Thinking, Managing self, Using language, symbols, and texts. **Values:** Innovation, inquiry and curiosity, excellence **Approximate time required:** 4 weeks	**Unit Title: AS91170** (AS2.2 Physics) Internal – Demonstrate understanding of Physics relevant to a selected context. **Achievement objectives:** • Demonstrate understanding of principles of Motion constant acceleration in a straight line; free fall under gravity, projectile motion; circular motion. • Be able to resolve Force components, vector addition of forces, unbalanced force and acceleration, equilibrium (balanced forces and torques), and explain centripetal force, force and extension of a spring. • Develop an understanding of momentum and energy issues in collisions **Learning outcomes/skills:** • To be able to describe and explain relate physics principles to a selected context. **Assessment tasks/method:** **Written report** **Key competencies:** Thinking, Managing self, Using language, symbols, and texts, Participating and contributing. **Values:** Inquiry and curiosity, excellence, respect. **Approximate time required:** 5 weeks	**Unit Title: AS91170** (AS2.3 Physics) External – Demonstrate understanding of waves **Achievement objectives:** • Demonstrate qualitative and quantitative understanding of Physics of Light (ie reflection in curved mirrors, refraction through lenses, refraction, total internal reflection and critical angle at a plane boundary). • Be able to explain and solve problems on Reflection and refraction of waves at a plane boundary including phase and wave parameter changes if applicable, superposition of pulses, diffraction, 2-point source interference (qualitative), **Learning outcomes/skills:** • To be able to describe and explain concepts and solve problems based on Light and Waves. **Assessment tasks/method:** • Mid Year Mock Examinations (Term 2). • Preliminary Mock Examinations (Term 3). • External NCEA examination at year's end. **Key competencies:** Thinking, Managing self, Using language, symbols, and texts, Participating and contributing. **Values:** Inquiry and curiosity, excellence, respect. **Approximate time required:** 6 weeks

Unit Title: AS91171 (AS2.4 Physics) External – Demonstrate understanding of mechanics

Achievement objectives:

- Demonstrate understanding of principles of Motion constant acceleration in a straight line; free fall under gravity, projectile motion; circular motion.
- Be able to resolve Force components, vector addition of forces, unbalanced force and acceleration, equilibrium (balanced forces and torques), and explain centripetal force, force and extension of a spring.
- Develop an understanding of momentum and energy issues in collisions

Learning outcomes/skills:

- To be able to solve quantitative problems in motion, forces and momentum and explain their principles.

Assessment tasks/method:

- Mid Year Mock Examinations (Term 2).
- Preliminary Mock Examinations (Term 3).
- External NCEA examination at year's end.

Key competencies: Thinking, Managing self, Using language, symbols, and texts, Participating and contributing.

Values: Inquiry and curiosity, excellence, participation

Approximate time required: 8 weeks

Unit Title: AS91172 (AS 2.5 Physics) Internal – Demonstrate understanding of atomic and nuclear physics

Achievement objectives:

- models of the atom (Thomson and Rutherford), gold foil experiment
- nuclear transformations: radioactive decay (half life), fission and fusion reactions
- conservation of atomic and mass number products of nuclear transformation: power generation, $E = mc^2$, $P = E/t$, properties of nuclear emissions (ionising ability, penetration ability)

Learning outcomes/skills:

- Should be able to demonstrate understanding of models of atoms and explain radioactivity.

Assessment tasks/method:

- The assessment will involve a formal one hour written test.

Key competencies: Thinking, Managing self, Using language, symbols, and texts, Participating and contributing.

Values: Inquiry and curiosity, Excellence, participation and contribution

Approximate time required: 4 -5 weeks

Unit Title: AS91173 (AS2.6 Physics) External – Demonstrate understanding of electricity and electromagnetism

Achievement objectives:

- Demonstrate understanding of Static Electricity in the following strands; Uniform electric field, electric field strength, force on a charge in an electric field, electric potential energy, and work done on a charge moving in an electric field.
- Develop understanding of series and parallel circuit with different circuit components.
- Be able to apply knowledge of DC motor and generator to every day application

Learning outcomes/skills:

- To be able to explain phenomenon of static, current electricity and electromagnetism and apply knowledge to solve quantitative problems.

Assessment tasks/method:

- Mid Year Mock Examinations (Term 2).
- Preliminary Mock Examinations (Term 3).
- External NCEA examination at year's end.

Key competencies: Thinking, Managing self, Using language, symbols, and texts, Participating and contributing.

Values: Inquiry and curiosity, excellence, innovation.

Approximate time required: 8 weeks

Achievement Standard

Subject Reference	Physics 2.1				
Title	Carry out a practical physics investigation that leads to a non-linear mathematical relationship				
Level	2	**Credits**	4	**Assessment**	Internal
Subfield	Science				
Domain	Physics				
Status	Registered	**Status date**	17 November 2011		
Planned review date	31 December 2020	**Date version published**	20 November 2014		

This achievement standard involves carrying out a practical physics investigation that leads to a non-linear mathematical relationship.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Carry out a practical physics investigation that leads to a non-linear mathematical relationship.	• Carry out an in-depth practical physics investigation that leads to a non-linear mathematical relationship.	• Carry out a comprehensive practical physics investigation that leads to a non-linear mathematical relationship.

Explanatory Notes

1 This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, Level 7; and is related to the material in the *Teaching and Learning Guide for Physics*, Ministry of Education, 2010 at http://seniorsecondary.tki.org.nz. The standard is aligned to the achievement objectives *Physical Inquiry and Physics Concepts* in the Physical World strand and *Investigating in Science* in the Nature of Science strand.

This standard is also derived from Te Marautanga o Aotearoa. For details of Te Marautanga o Aotearoa achievement objectives to which this standard relates, see the Papa Whakaako for the relevant learning area.

2 *Carry out a practical physics investigation* involves:
- collecting data relevant to the aim based on the manipulation of the independent variable over a reasonable range and number of values
- drawing a graph that shows the relationship between the independent and dependent variables
- writing a conclusion which describes the type of mathematical relationship that exists between the variables.

Carry out an in-depth practical physics investigation involves:
- controlling the variable(s) that could have a significant effect on the results
- using technique(s) that increase the accuracy of the measured values of the dependent (and independent, if appropriate) variable
- writing a conclusion that describes the mathematical relationship obtained from the experimental data.

Carry out a comprehensive practical physics investigation involves writing a discussion that addresses critical issues such as:
- a reason why there is a limit to either end of the value chosen for the independent variable
- a justification for why a variable needs to be controlled
- a description of any difficulties encountered when making measurements and how these difficulties were overcome
- the relationship between the findings and physics ideas
- a description of any unexpected results and a suggestion of how they could have been caused and/or the effect they had on the validity of the conclusion.

3 *A practical physics investigation* is an activity that includes gathering, processing and interpreting data.

4 Conditions of Assessment related to this achievement standard can be found at http://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards.

Replacement Information
This achievement standard replaced AS90252 and unit standard 6386.

Quality Assurance

1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.

2 Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference 0233

Achievement Standard

Subject Reference	Physics 2.2				
Title	Demonstrate understanding of physics relevant to a selected context				
Level	2	**Credits**	3	**Assessment**	Internal
Subfield	Science				
Domain	Physics				
Status	Registered	**Status date**	17 November 2011		
Planned review date	31 December 2020	**Date version published**	20 November 2014		

This achievement standard involves the understanding of physics relevant to a selected context.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Demonstrate understanding of physics relevant to a selected context.	• Demonstrate in-depth understanding of physics relevant to a selected context.	• Demonstrate comprehensive understanding of physics relevant to a selected context.

Explanatory Notes

1 This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, Level 7; and is related to the material in the *Teaching and Learning Guide for Physics*, Ministry of Education, 2010 at http://seniorsecondary.tki.org.nz. The standard is aligned to the achievement objectives *Using Physics* in the Physical World strand, and *Communicating in Science* in the Nature of Science strand.

This standard is also derived from Te Marautanga o Aotearoa. For details of Te Marautanga o Aotearoa achievement objectives to which this standard relates, see the Papa Whakaako for the relevant learning area.

2 *Demonstrate understanding* involves providing characteristics of, or an account of the physics related to the selected context.

Demonstrate in-depth understanding involves providing reasons as to how or why the physics applies to the selected context.

Demonstrate comprehensive understanding involves linking ideas to integrate physics relevant to the selected context, and involves elaborating, justifying, relating, evaluating, comparing and contrasting, or analysing the physics underpinning the context.

3 The *selected context* must involve physics principles that are at curriculum Level 7. It may be technological or biological.

4 Conditions of Assessment related to this achievement standard can be found at http://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards.

Replacement Information

This achievement standard replaced AS90258.

Quality Assurance

1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.

2 Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference 0233

Achievement Standard

Subject Reference	Physics 2.4				
Title	Demonstrate understanding of mechanics				
Level	2	**Credits**	6	**Assessment**	External
Subfield	Science				
Domain	Physics				
Status	Registered	**Status date**	17 November 2011		
Planned review date	31 December 2020	**Date version published**	20 November 2014		

This achievement standard involves demonstrating understanding of mechanics.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Demonstrate understanding of mechanics.	• Demonstrate in-depth understanding of mechanics.	• Demonstrate comprehensive understanding of mechanics.

Explanatory Notes

1 This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, Level 7; and is related to the material in the *Teaching and Learning Guide for Physics*, Ministry of Education, 2010 at http://seniorsecondary.tki.org.nz. The standard is aligned to the achievement objectives *Physical Inquiry and Physics Concepts* in the Physical World strand and *Communicating in Science* in the Nature of Science strand.

This standard is also derived from Te Marautanga o Aotearoa. For details of Te Marautanga o Aotearoa achievement objectives to which this standard relates, see the Papa Whakaako for the relevant learning area.

2 *Demonstrate understanding* involves writing statements that show an awareness of how simple facets of phenomena, concepts or principles relate to a described situation.

Demonstrate in-depth understanding involves writing statements that give reasons why phenomena, concepts or principles relate to a described situation. For mathematical solutions, the information may not be directly usable or immediately obvious.

Demonstrate comprehensive understanding involves writing statements that demonstrate understanding of connections between concepts.

3 Written statements include mathematical solutions and/or descriptions. Descriptions may include graphs or diagrams.

4 Assessment is limited to a selection from the following:

Motion:
- constant acceleration in a straight line
- free fall under gravity
- projectile motion
- circular motion (constant speed with one force only providing centripetal force).

Force:
- force components
- vector addition of forces
- unbalanced force and acceleration
- equilibrium (balanced forces and torques)
- centripetal force
- force and extension of a spring.

Momentum and Energy:
- momentum
- change in momentum in one dimension and impulse
- impulse and force
- conservation of momentum in one dimension
- work
- power and conservation of energy
- elastic potential energy.

Relationships:

$v = \frac{\Delta d}{\Delta t}$ $a = \frac{\Delta v}{\Delta t}$

$v_f = v_i + at$ $d = v_i t + \frac{1}{2} a t^2$

$d = \frac{v_i + v_f}{2} t$ $v_f^2 = v_i^2 + 2ad$

$a_c = \frac{v^2}{r}$

$p = mv$ $\Delta p = F \Delta t$

$E_p = \frac{1}{2} k x^2$ $E_k = \frac{1}{2} m v^2$ $\Delta E_p = mg \Delta h$

$W = Fd$ $P = \frac{W}{t}$

$F = ma$ $\tau = Fd$

Achievement Standard

Subject Reference	Physics 2.5				
Title	Demonstrate understanding of atomic and nuclear physics				
Level	2	**Credits**	3	**Assessment**	Internal
Subfield	Science				
Domain	Physics				
Status	Registered	**Status date**	17 November 2011		
Planned review date	31 December 2020	**Date version published**	20 November 2014		

This achievement standard involves demonstrating understanding of atomic and nuclear physics.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Demonstrate understanding of atomic and nuclear physics.	• Demonstrate in-depth understanding of atomic and nuclear physics.	• Demonstrate comprehensive understanding of atomic and nuclear physics.

Explanatory Notes

1 This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, Level 7; and is related to the material in the *Teaching and Learning Guide for Physics*, Ministry of Education, 2010 at http://seniorsecondary.tki.org.nz. The standard is aligned to the achievement objectives *Physical Inquiry and Physics Concepts* in the Physical World strand and *Communicating in Science* in the Nature of Science strand.

This standard is also derived from Te Marautanga o Aotearoa. For details of Te Marautanga o Aotearoa achievement objectives to which this standard relates, see the Papa Whakaako for the relevant learning area.

2 *Demonstrate understanding* involves writing statements that show an awareness of how simple facets of phenomena, concepts or principles relate to a described situation.

Demonstrate in-depth understanding involves writing statements that give reasons why phenomena, concepts or principles relate to a described situation. For mathematical solutions, the information may not be directly usable or immediately obvious.

Demonstrate comprehensive understanding involves writing statements that demonstrate understanding of connections between concepts.

3 Written statements include mathematical solutions and/or descriptions. Descriptions may include graphs or diagrams.

4 Assessment typically includes:
- models of the atom (Thomson and Rutherford), gold foil experiment
- nuclear transformations: radioactive decay (half life), fission and fusion reactions
- conservation of atomic and mass number
- products of nuclear transformation: power generation, $E = mc^2$, $P = E/t$, properties of nuclear emissions (ionising ability, penetration ability).

5 Conditions of Assessment related to this achievement standard can be found at http://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards.

Replacement Information
This achievement standard replaced AS90256.

Quality Assurance

1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.

2 Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference 0233

Achievement Standard

Subject Reference	Physics 2.6				
Title	Demonstrate understanding of electricity and electromagnetism				
Level	2	**Credits**	6	**Assessment**	External
Subfield	Science				
Domain	Physics				
Status	Registered	**Status date**	17 November 2011		
Planned review date	31 December 2020	**Date version published**	20 November 2014		

This achievement standard involves demonstrating understanding of electricity and electromagnetism.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Demonstrate understanding of electricity and electromagnetism.	• Demonstrate in-depth understanding of electricity and electromagnetism.	• Demonstrate comprehensive understanding of electricity and electromagnetism.

Explanatory Notes

1 This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, Level 7; and is related to the material in the *Teaching and Learning Guide for Physics*, Ministry of Education, 2010 at http://seniorsecondary.tki.org.nz. The standard is aligned to the achievement objectives *Physical Inquiry and Physics Concepts* in the Physical World strand and *Communicating in Science* in the Nature of Science strand.

This standard is also derived from Te Marautanga o Aotearoa. For details of Te Marautanga o Aotearoa achievement objectives to which this standard relates, see the Papa Whakaako for the relevant learning area.

2 *Demonstrate understanding* involves writing statements that show an awareness of how simple facets of phenomena, concepts or principles relate to a described situation.

Demonstrate in-depth understanding involves writing statements that give reasons why phenomena, concepts or principles relate to a described situation. For

mathematical solutions, the information may not be directly usable or immediately obvious.

Demonstrate comprehensive understanding involves writing statements that demonstrate understanding of connections between concepts.

3 Written statements include mathematical solutions and/or descriptions. Descriptions may include graphs or diagrams.

4 Assessment is limited to a selection from the following:

Static Electricity:
- uniform electric field
- electric field strength
- force on a charge in an electric field
- electric potential energy
- work done on a charge moving in an electric field.

DC Electricity:
- parallel circuits with resistive component(s) in series with the source
- circuit diagrams
- voltage
- current
- resistance
- energy
- power.

Electromagnetism:
- force on a current carrying conductor in a magnetic field
- force on charged particles moving in a magnetic field
- induced voltage generated across a straight conductor moving in a uniform magnetic field.

Relationships:

$E=\frac{V}{d}$ $F=Eq$ $\Delta E_p=Eqd$ $E_k=\frac{1}{2}mv^2$

$F=BIL$ $F=Bqv$ $V=BvL$

$I=\frac{q}{t}$ $V=\frac{\Delta E}{q}$ $V=IR$ $P=IV$ $P=\frac{\Delta E}{t}$

$R_T=R_1+R_2+\ldots$ $\frac{1}{R_T}=\frac{1}{R_1}+\frac{1}{R_2}+\ldots$

5 Assessment Specifications for this achievement standard can be accessed through the Physics Resources page found at http://www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/ncea-subject-resources/.

2022 PHY202 – Student Guide to Bibliographies / Referencing

A bibliography is the 'trail' of reading that you did to inform your thinking for your essay or assignment. A bibliography is organised alphabetically by the author's last name.

Setting up a bibliography APA style:

Item	Reference list entries	In text citation
Book **one author**	Pilger, J. (2006). *Freedom next time.* London, England: Bantam.	(Pilger, 2006) or ... Pilger (2006).
Book **two authors**	Shaw, R., & Eichbaum, C. (2008). *Public policy in New Zealand: Institutions, processes and outcomes.* Auckland, New Zealand: Pearson Education.	(Shaw & Eichbaum, 2008) *or* According to Shaw and Eichbaum (2008) ...
Book **three - five authors**	Alred, G. J., Brusaw, C. T., & Oliu, W. E. (2009). *The business writer's handbook*. New York, NY: St Martin's Press.	*First citation:* (Alred, Brusaw, & Oliu, 2009) *Subsequent citations:* (Alred et al., 2009)
Book **six - seven authors**	Gazda, G. M., Balzer, F. J., Childers, W. C., Nealy, A. U., Phelps, R. E., & Walters, R. P. (2005). *Human relations development: A manual for educators* (7th ed.). Boston, MA: Pearson Educational.	(Gazda et al., 2005)
Website **html** **no date**	Flesch, R. (n.d.). *How to write plain English.* Retrieved April 12, 2009, from http://www.mang.canterbury.ac.nz/writing_guide /writing/flesch.shtml	(Flesch, n.d.)
Website **PDF**	Radio New Zealand. (2008). *Annual report 2007-2008*. Retrieved from http://static.radionz.net.nz/assets/pdf_file /0010/1796761/Radio_NZ_Annual_Report_2008.pdf	(Radio New Zealand, 2008)
Video **online**	Bellofolletti. (2009, April 8). *Ghost caught on surveillance camera* [Video file]. Retrieved from http://www.youtube.com /watch?v =Dq1ms2JhYBI&feature=related	(Bellofolleti, 2009)

De La Salle College
Assessment Result Appeal Form

Name: _____ Class: _____

Name/number of standard being appealed: _____

Subject: _____ Teacher who marked work: _____

Grade awarded for standard: _____

Date work returned to student: _____ Date of appeal:_____

Reason for appeal:

Student signature: _____ Caregiver's signature: _____

OFFICE USE ONLY

Teacher response:

HOF response:

Principal's Nominee response:

Final decision:

De La Salle College

Absence From Internal Assessment

Application for Extension

Student: _____ Class: _____

Subject: _____ Teacher: _____

Assessment title: _____

Standard number: _____

Type of assessment activity *(test, practical, assignment etc).*

Date of assessment or due date: _____

Reason for application:

- ☐ Illness or injury: *medical certificate or a letter from parent / caregiver* must be attached.
- ☐ Family / personal trauma: documentation must be attached *(eg. a letter from parent / caregiver, counsellor or Dean).*
- ☐ School activity *(sporting or cultural)* _____

Signature of the teacher-in-charge of the activity: _____

Decision by Principal's Nominee:

- ☐ Extension granted, new due date: _____
- ☐ New assessment granted, new date: _____
- ☐ Compassionate consideration will be used to determine a grade. HOD / TIC to attach documentation of evidence used to determine the grade and the grade awarded.
- ☐ Application denied. Comment: _____

_____

The reason for this has been explained to me and I accept the decision.

Signed: _____ (Student) _____ (Teacher)