



TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI



**VICTORIA**  
UNIVERSITY OF WELLINGTON

**Te Kawa a Māui**

Faculty of Humanities and Social Sciences

# MAOR 124

## Te Pūtaiao Māori Māori Science

Course Reference Number (CRN): 3058

**Trimester 2, 2012 dates**

Lectures begin Monday, 16 July

Lectures end Friday, 19 October

Mid-trimester break 27 August - 9 September

Last piece of assessment due tbc (final examination)

Study week 22 - 26 October

Assessment/examination period 26 October - 17 November



Tēnā koutou e ngā tauira e whai ake nei i te mātauranga a ō tātou tūpuna. Ko tēnei te mihi nui ki a rātou mā, ki a koutou katoa hoki. Koinei ngā kōrero whakamārama mō tēnei karaihe, te pūtaiao o te Māori, i te wāhanga tuarua o te tau 2012.

***E tipu, e rea mō nga rā o tōu ao***

**1 KO NGĀ WHAKAHAERE  
Course Administration**

**Ko te Pūkenga  
Course Coordinator**

Dr Ocean Mercier  
Room 207, 50 Kelburn Parade  
Telephone 463 7457  
Email [ocean.mercier@vuw.ac.nz](mailto:ocean.mercier@vuw.ac.nz)

**Lectures**

Monday, 10:00-11:50am (HULT119)  
Thursday, 10:00-10:50am (MR101)

**Office Hours**

Monday, 2-4pm

**Class Representative**

The MAOR 124 class representative is a channel through which VUWSA can liaise with the Course Coordinator on behalf of students. The class representative will be elected in Week 1. That person's name and contact details will be given to VUWSA, the Course Coordinator and the class, through Blackboard.

Notices and additional course information will be posted on the MAOR 124 Blackboard site at <http://blackboard.vuw.ac.nz>

**2 KO NGĀ WHĀINGA ME NGĀ HUA  
Course Aims and Learning Objectives**

**Course Prescription**

This course examines tikanga and mātauranga Māori (Māori knowledge and science) in both traditional and contemporary contexts. It examines the differences and similarities between "Western" and Māori ways of knowing. Fortnightly two-hour laboratories/field trips/tutorials allow students to engage with Māori science in practical ways.

**Learning Objectives**

This course examines the involvement and engagement of Māori in scientific endeavours, historically, in the present day, and in the future. It seeks to give students an understanding of the philosophical differences between "Western" and Indigenous knowledge and science. From this, students will become better equipped to debate contemporary issues, particularly regarding new technologies, at this cultural interface.

By the end of this course students should be able to:

- justify the use of the term “Māori science”
- differentiate between Māori, indigenous and “Western” ideologies and philosophies
- discuss examples of scientific methodology used by Māori and indigenous peoples in their traditional knowledge
- describe “Māori” viewpoints on contentious scientific issues
- understand the challenges facing Māori people who wish to engage in “Western” science and technologies
- describe some of the challenges and opportunities to “Western” science and Māori knowledge interacting at the ‘interface’, and
- recall and describe case studies in which this interface is explored.

### **3 KO NGĀ KAUPAPA MATUA** **Course Content**

The main themes of the course are:

- What is Science?
- What is Māori Science?
- Traditional Māori Knowledge / Mātauranga Māori
- Māori positions on contentious issues and new technologies
- Māori Science and the international context, and
- Māori engagement with science: past, present and future.

At the end of this course the students will be expected to:

- justify the use of the term “Māori science”, in order to critically inform development strategies and policies at both national and international levels
- know how different knowledge systems, sciences and worldviews have influenced the management of the natural world, and be able to critically evaluate the influence of the “Western” scientific worldview on global policies, procedures and legislation and their impact on Māori and indigenous self-development
- recall recent case studies of Māori people engaged in and with science, and from this be able to critically examine which strategies best promote Māori leadership in science
- through engagement with indigenous scholarship at the cutting edge of the emerging field of “interface” research, be empowered to contribute to discussions regarding Māori development in today’s world
- show an understanding of Māori views and key Māori concepts on environmental management, and be able to apply these concepts to the identifying of Māori positions on contentious issues in science, such as xenotransplantation, and
- have developed a creative yet critical writing style that addresses a range of Māori and indigenous issues arising from global and national policies, frameworks, procedures and legislation.

## **4 KO NGĀ PUKAPUKA Essential Texts**

### **4.1 Required Text**

Students are required to purchase the Course Reader, *MAOR 124 Te Pūtaiao Māori/Māori Science*, cost to be confirmed. You should purchase this early in order to get a head start on your readings.

### **4.2 Obtaining Student Notes**

All undergraduate textbooks and student notes will be sold from the Memorial Theatre foyer from 9-27 July 2012, while postgraduate textbooks and student notes will be available from the top floor of vicbooks in the Student Union Building, Kelburn Campus. After Week 2 of the trimester, all undergraduate textbooks and student notes will be sold from vicbooks on Level 4 of the Student Union Building.

Students can order textbooks and student notes online at [www.vicbooks.co.nz](http://www.vicbooks.co.nz) or can email an order or enquiry to [enquiries@vicbooks.co.nz](mailto:enquiries@vicbooks.co.nz). Books can be couriered to students or they can be picked up from nominated collection points at each campus. Students will be contacted when they are available.

Opening hours are 8:00am - 6:00pm, Monday - Friday during term time (closing at 5:00pm in the holidays). Telephone 463 5515.

At the start of the trimester please refer to the noticeboards at 48 and 50 Kelburn Parade for an updated list of Course Readers available for purchase.

### **4.3 Recommended Dictionary**

Thompson, Della (ed), 1995. *The Concise Oxford Dictionary of Current English*. Oxford: Clarendon Press. Also available Internet: <http://dictionary.oed.com/>

### **4.4 Academic Writing Guide**

Students will be required to make their written work conform to the standards for referencing set out in *Te Ara Poutama* – the new Te Kawa a Māui writing guide. You can download a copy of this writing guide from the MAOR 124 Blackboard site.

### **4.5 Blackboard Internet Support**

Students will be expected to keep a thorough record of all lecture notes. However, notices and class material, including lecture outlines, will be posted on Blackboard, the Internet learning support site, accessed at the following url: <http://blackboard.vuw.ac.nz/>.

## 5 KO NGĀ MAHI Course Work

### 5.1 Lectures

MAOR 124 is a half year, second trimester course, and lectures are twice a week for a total of 36 hours. You should attend a minimum 30 of 36 lecture hours to keep up with the ideas we cover in lectures. An attendance roll will be taken during each lecture.

Lectures are held:

Monday	10:00-11:50am	HULT119 (Hunter Building)
Thursday	10:00-10:50am	Te Tumu Herenga Waka (MR101)

### 5.2 Field Trips

In addition to lectures, students will attend one workshop and three field trips. Activities to supplement classroom learning will be planned for each workshop/field trip (see course programme). Students will work on assignments during each session. The two-hour on-campus field trip (Week 2) and two-hour Google Earth workshop (Week 6) will be offered at 4 different times during the week: Monday 3-5pm, Tuesday 2-4pm, Wednesday 3-5pm, and Thursday 2-4pm. Students will sign up in Week 1 for their preferred time, with no more than 15 students per session. The Google Earth workshop takes place in MY221. The meeting place for the on-campus field trip is Ngā Mokopuna (the Wharekai at Te Herenga Waka Marae).

At 7-9pm on Tuesday 7 August, the whole class will go on a field trip to the Carter Observatory, Botanical Gardens, signposted from the top of the Cable Car. The cost of this field trip is \$10. Please pay your fee to Jeremy Porima in the front office at 50 Kelburn Parade. You should arrive by 6:50pm to ensure a timely start of the planetarium show. Weather allowing, we will also observe the skies through the telescope.

On Saturday 15 September, the class will go on a field trip to gather data for the cultural atlas exercise. We will leave campus at 8:30am and be back by 3:00pm. There is no cost for this trip, but you will be expected to bring your own lunch. You will also need to wear warm clothing and sturdy shoes, bring water, a hat and raincoat, and sunscreen. More details will be distributed in class and posted on Blackboard.

### 5.3 Course Workload

MAOR 124 is worth 20 points, which equates to 200 hours of work across the whole course. Assuming 20 hours dedicated to preparing for and sitting the final examination, students should allow fifteen (15) hours per week, inclusive of lecture and workshop/field trip time, during the trimester for this course.

MAOR 124	2/3	4 classroom hours, 11 hours extra mahi
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## 6 KO NGĀ TATAURANGA Course Assessment

### 6.1 Course Work

All work for this course MUST be posted in the Assignment Box, Māori Studies Office, 50 Kelburn Parade, where they will be registered. Please DO NOT hand work to the Course Coordinator or leave assignments under the Coordinator's door. Always keep a copy of your work.

It is highly important that the students attend all lectures, especially when guest lecturers are scheduled to speak.

### 6.2 Assessment Tasks

Coursework will account for 60% of the total assessment for this course. The other 40% will be a final examination at the end of the course. You must also attain a minimum combined mark of 50%.

6.3 Internal Course Work	60%	Due Date
Field Trip Assignments	20%	2 Aug-15 Sep (Week 3-8)
In-Class Test	10%	23 Aug (Week 6)
Cultural Atlas Exercise	10%	4 Oct (Week 10)
Essay (1500 words)	20%	18 Oct (Week 12)
6.4 Field Trip/Workshop Assignments	4 @ 5% each = 20%	

An assignment will be given out during the field trips and workshop, and is due by 5:00pm one week later. You are required to complete 3 of the 4 total assignments, but it is in your best interests to complete all 4, as each counts up to 5% towards your final mark. Each assignment will also be posted on Blackboard, so that students who are unable to attend their workshop can work on the assignment in their own time. The assignments will consolidate the practical knowledge you gain during the workshops, and help you meet the learning objectives of the course.

### 6.5 In-Class Test 10%

A 50 minute test is scheduled for Week 6 of the course. This will examine all lecture and workshop material covered up to and including **20 August**. The in-class test gives you the opportunity to consolidate what you have learnt, and identify areas of weakness that may be corrected in time for the final examination.

### 6.6 Cultural Atlas Exercise 10%

In 2010, Te Kawa a Māui instigated a School-wide research project that enables student contributions to an electronic 'cultural atlas'. In this exercise, students will write a report on their midden field trip/s. Students will geographically locate the Māori knowledge in their allocated reading, and ultimately contribute their research to the Cultural Atlas database. This

assessment will constitute about 1000 words. Work for this assessment is due by **5:00pm, 4 October**. More detail will be given in class and posted on Blackboard.

**6.7 Essay 20%**

On or before **5:00pm** on the **18 October** you will submit a 1500-word essay, worth 20%. The essay topics will be distributed in lectures and posted on Blackboard. Essays are expected to use the JPS (a variant of Harvard) style of formatting and referencing. Essay topics are designed to allow you the opportunity to investigate more closely an area of interest to you, yet within the confines of the course objectives.

**6.8 Final Written Examination 40%**

The Final Examination is a two-hour closed book examination held during the **Trimester 2 Examination Period (26 October – 17 November inclusive)**. **For courses with a final examination, students must be available to attend the examination at any time during this period.** The date, time and venue will be announced on Blackboard as soon as this information becomes available.

**7 KO NGĀ WHIUNGA  
Penalties**

Extensions will only be granted for extenuating circumstances. You should contact the Pūkenga as soon as you are aware of any issues that may impinge on timely submission of your work. Work submitted late will be penalised by 5% for each day. Work emailed to the course coordinator will automatically attract a 5% penalty. Where students have not informed the Course Coordinator, more severe penalties may be imposed.

**8 KO NGĀ MAHI  
Mandatory Course Requirements**

In order to complete this course, students must:

- attend at least 30 of 36 lecture hours in total
- complete internal assessment as specified, and
- attempt the final examination.



**9 KO TE MAHERE MAHI**  
**Course Programme**

This programme provides a **guide** to lecture content. The programme is flexible and may be changed at the discretion of the Course Coordinator, and depending on the needs of the class.

Week	Lecture	Date	Lecturer Topic	Required Reading Readings are in the Course Reader (CR) unless otherwise stated	Assessment
1	1	16 Jul	Course Overview Science, Pūtaiao	Course outline (handout) Harris and Mercier 2006 (CR: p.3)	
	2	19 Jul	What is Science?		
2	3	23 Jul	The “Western” Science Tribe	Ladyman 2002 (CR: p.128)	
	4	26 Jul	Epistemology and Mātauranga Māori	Roberts and Wills 1998 (CR: p.45) Royal 2003 (CR: p.15)	
<b>WORKSHOP 1: Aotearoa Flora and Fauna around Kelburn Parade/Glasgow Terrace</b>					
3	5	30 Jul	Epistemology and “Māori Science”	Sarfati 1999 (CR: p.140) Long 2005 (CR: p.149) Dickison 1994 (CR: p.157) Walker 1994 (CR: p.158) Lomax 1996 (CR: p.160) Kapua 1997 (CR: p.162)	<b>Workshop Assignment 1 (5%)</b>
	6	2 Aug	“Māori Science”		
4	7	6 Aug	Tātai Arorangi Māori Astronomy / Rongoā Māori	Moon 2003 (CR: p.37)	
	8	9 Aug	Rongoā Māori (video)	Williams 2001 (CR: p.89)	
<b>WORKSHOP 2: Carter Observatory field trip (7 August)</b>					
5	9	13 Aug	“Early Māori Had no Herbal Medicine” Māori Mathematics / Measurement	Brockie 2006 (CR: p.175) Mercier 2007 (CR: p.221) IRL Innovate 2000 (Blackboard) Best 1922 (CR: pp.81-88)	<b>Workshop Assignment 2 (5%)</b>
	10	16 Aug	Polynesian Navigation	Turnbull 1991 (Blackboard)	
6	11	20 Aug	Made in Taiwan (video) Ancestry: Whakapapa and Genetics	Menzies 2006 (CR: p.183) Misc articles (CR: pp.178-182)	<b>In-Class Test (10%)</b>
	12	23 Aug	<b>IN-CLASS TEST</b>		
<b>WORKSHOP 3: GPS and Google Earth</b>					
<b>MID TRIMESTER BREAK: 27 August – 9 September</b>					

7	13	10 Sep	Time Astro-time / Maramataka	Best 1922 (CR: pp.81-88)	<b>Workshop Assignment 3 (5%)</b>
	14	13 Sep	Hostile Shores (Guest Lecturer: Bruce McFadgen)		
<b>WORKSHOP 4: Field Trip (15 September) – further details tbc</b>					
8	15	17 Sep	Māori AND Science The 'Interface'	Walker 1998 (CR: p.232) Roberts 1996 (CR: p.63) Durie 2005 (CR: p.207)	<b>Workshop Assignment 4 (5%)</b>
	16	20 Sep	Te Reo Science – Te Whata Kura Ahupungao	Mercier 2007 (CR: p.221)	
9	17	24 Sep	Environmental Kaitiakitanga Kaitiakitanga and Government	Royal 2003 (CR: p.15) Smith 2006 (CR: p.239)	
	18	27 Sep	Intellectual and Cultural Property	Victorious 2001 (CR: p.185)	
10	19	1 Oct	Wai 262 Genetic Modification	Williams 2001 (CR: p.226) Hutchings 2001a, b (CR: pp.259, 261)	<b>Cultural Atlas Exercise (10%), due: 4 Oct</b>
	20	4 Oct	5 Test Framework - Xenotransplantation	Mead 2003 (CR: p.271)	
11	21	8 Oct	Mana Wahine Framework Mātauranga Māori in NZ Science	Hutchings 2004 (CR: p.280)	
	22	11 Oct	Mātauranga Māori in Education	Barker 1999 (CR: p.201)	
12	23	15 Oct	Mātauranga Māori in Education Māori in / and Science	Walker 1998 (CR: p.232)	<b>Essay (20%), due: 18 Oct</b>
	24	18 Oct	Course Revision / Mū Torere		

**10 KO NGĀ HAUĀ**  
**Students with a Disability**

The University has a policy of reasonable accommodation for the needs of students with disabilities in examinations and other assessment procedures. Please contact the Course Coordinator if you have any queries or issues.

**11 KO NGĀ PUKAPUKA**  
**Reference Texts**

A variety of texts have been placed on Closed Reserve and 3-day Loan at Te Pātaka Kōrero/The University Library (Levels 2 and 3 respectively) to assist you with your study and essay writing. Students should return Library books by the due date to avoid Library fines.

The following list gives references that may be useful for the essay topics in the course. Note that the full text of the Elsdon Best monographs is available via MyGateway.info. More details on how to access these are available on Blackboard.

Best, Elsdon, 1955. *The Astronomical Knowledge of the Māori*. Dominion Museum Monograph no. 3 Wellington: Government Printer.

Best, Elsdon, 1959. *The Māori Division of Time*. Dominion Museum Monograph no. 4 Wellington: Government Printer.

Best, Elsdon, 1923. *Polynesian Voyagers. The Māori as a Deep-sea Navigator, Explorer, and Colonizer*. Dominion Museum Monograph no. 5 Wellington: Government Printer.

Chalmers, Alan, 1999. *What is this thing called science? (3<sup>rd</sup> edition)*. Indianapolis: Hackett Publishers

Goldie, W. H, 1904. *Māori Medical Lore*. Papakura: Southern Reprints (1998).

Ladyman, James, 2002. *Understanding Philosophy of Science*. London: Routledge.

Lewis, David, 1972, 1994 (2nd ed.). *We, the Navigators*. Honolulu: University of Hawaii Press.

McLean, Robert and Smith, Tricia, 2001. *The Crown and Flora and Fauna: Legislation, Policies and Practices 1983-98*. Waitangi Tribunal Research Series Wai 262 (1997). Wellington: Waitangi Tribunal.

Riley, Murdoch, 1994. *Māori Healing and Herbal*. New Zealand Ethnobotanical Sourcebook. Paraparaumu: Viking Sevenses N.Z. Ltd.

Williams, David, 2001. *Mātauranga Māori and Taonga*. Waitangi Tribunal Research Series Wai 262 (1997). Wellington: Waitangi Tribunal.

Williams, P. M. E. 1996. *Te Rongoa Māori. Māori Medicine*. Auckland: Reed

You should also tune in to Māori Television to watch the 13-episode series Project Mātauranga from 4 August (transmission time to be advised).

## 12 ACADEMIC INTEGRITY AND PLAGIARISM

Academic integrity means that University staff and students, in their teaching and learning are expected to treat others honestly, fairly and with respect at all times. It is not acceptable to mistreat academic, intellectual or creative work that has been done by other people by representing it as your own original work.

Academic integrity is important because it is the core value on which the University's learning, teaching and research activities are based. Victoria University's reputation for academic integrity adds value to your qualification.

The University defines plagiarism as presenting someone else's work as if it were your own, whether you mean to or not. 'Someone else's work' means anything that is not your own idea. Even if it is presented in your own style, you must acknowledge your sources fully and appropriately. This includes:

- material from books, journals or any other printed source
- the work of other students or staff
- information from the internet
- software programmes and other electronic material
- designs and ideas, and
- the organisation or structuring of any such material.

Find out more about plagiarism, how to avoid it and penalties, on the University's website: [www.victoria.ac.nz/home/study/plagiarism.aspx](http://www.victoria.ac.nz/home/study/plagiarism.aspx)

## 13 WHERE TO FIND MORE DETAILED INFORMATION

- Find key dates, explanations of grades and other useful information at:  
[www.victoria.ac.nz/home/study](http://www.victoria.ac.nz/home/study)
- Find out how academic progress is monitored and how enrolment can be restricted at:  
[www.victoria.ac.nz/home/study/academic-progress](http://www.victoria.ac.nz/home/study/academic-progress)
- Most statutes and policies are available at:  
[www.victoria.ac.nz/home/about/policy](http://www.victoria.ac.nz/home/about/policy)
- However, qualification statutes are available via the *Calendar* webpage at:  
[www.victoria.ac.nz/home/study/calendar.aspx](http://www.victoria.ac.nz/home/study/calendar.aspx) (see Section C)
- Other useful information for students may be found at the website of the Assistant Vice-Chancellor (Academic) at:  
[www.victoria.ac.nz/home/about\\_victoria/avcademic](http://www.victoria.ac.nz/home/about_victoria/avcademic)

## 14 WITHDRAWAL DATES

Have you changed your mind about the courses you want to do this trimester? If you do not withdraw from a course in time, you will receive a fail grade. A fail grade stays permanently on your academic record. You can avoid the fail grade by withdrawing properly from courses before it is too late!

It is not enough just to stop attending lectures and tutorials, or to tell your lecturer or school administrator. You must complete a course/add drop form, available from your Faculty, Student and Academic Services Office, and submit it by the due dates specified at:

[www.victoria.ac.nz/home/admisenrol/payments/withdrawalsrefunds.aspx](http://www.victoria.ac.nz/home/admisenrol/payments/withdrawalsrefunds.aspx)

Information about refunds may also be found here.

You are also advised to carefully consider how 'late' withdrawals might impact on your StudyLink eligibility. This information can be found at:

[www.victoria.ac.nz/home/admisenrol/payments/performance-criteria.aspx](http://www.victoria.ac.nz/home/admisenrol/payments/performance-criteria.aspx)