



## PAPER OUTLINE 2014

**Paper Code & Title:** CMPO 281 *Computer Music Programming for Live Electronics*  
**Trimester:** 2                      **Year:** 2014  
**CRN:** 19767                      **Campus:** NZSM - VUW Kelburn  
**Points:** 15  
**Prerequisites:** CMPO 181 or 20 100-level pts  
**Corequisites:** None  
**Restrictions:** CMPO 110

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**Important dates:** Trimester dates: 14 July–16 November 2014  
Teaching dates: 14 July–17 October 2014  
Mid-trimester break: 25 August–7 September 2014

Last assessment item due: 7 November 2014  
Study week: 20–24 October 2014  
Examination/Assessment Period: 24 October–15 November 2014  
(where applicable) *NB: For courses with exams, students must be available to attend the exam at any time during this period.*

Withdrawal date: 25 July 2014  
*Refer to [www.victoria.ac.nz/students/study/withdrawals-refunds](http://www.victoria.ac.nz/students/study/withdrawals-refunds)  
If you cannot complete an assignment, or sit a test or examination, refer to  
[www.victoria.ac.nz/students/study/exams/aegrotats](http://www.victoria.ac.nz/students/study/exams/aegrotats)*

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**Class times & location:** Tuesday, 9:00am–10:50am (Room MS112: Sonic Arts Lab)  
Friday, 10:00am–10:50am (Room MS112: Sonic Arts Lab)  
**Workshop times & location:** Wednesday, 3:10pm–4:30pm (Room MS301: Adam Concert Room)  
**Tutorial times & locations:** To be confirmed in Week 1 of classes.  
*Tutorials commence in the second week of the trimester. Groups will be posted on Blackboard and/or on the noticeboard outside the office on the NZSM Kelburn Campus at the start of Week 2.*

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## NAMES AND CONTACT DETAILS

**Course Coordinator:** Ted Apel  
**Contact phone:** 463 9562                      **Email:** [ted.apel@nzsm.ac.nz](mailto:ted.apel@nzsm.ac.nz)  
**Office located at:** Room 202, 92 Fairlie Terrace, Kelburn Campus  
**Office hours:** TBA

**Tutors:** TBA                      **Email:** TBA

**Programme Administrator:** Fiona Steedman                      **Email:** [fiona.steedman@nzsm.ac.nz](mailto:fiona.steedman@nzsm.ac.nz)

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## COMMUNICATION OF ADDITIONAL INFORMATION

Official notices issued after the paper has commenced will be posted on the board outside the NZSM office on the Kelburn Campus. Notices concerning a number of papers will also be posted on Blackboard. The Course Coordinator will specify if Blackboard will be used.

## **PRESCRIPTION**

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*A study of object-oriented computer music programming languages, including general programming concepts, synthesis, analysis and real-time systems, and their use in music technology-based creative practice.*

## **PAPER LEARNING OUTCOMES**

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Students who successfully complete this course will be able to:

1. demonstrate competency in basic programming skills for live electronics
2. demonstrate an understanding of the concepts of object orientation, concurrency and multi-threading in a sonic/musical context
3. build a system for real-time control of musical sound.

These learning outcomes contribute to the NZSM Graduate Attributes. For a full list, please see [www.nzsm.ac.nz/study-here/graduate-attributes](http://www.nzsm.ac.nz/study-here/graduate-attributes)

## **TEACHING FORMAT**

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This course comprises one 2-hour lecture and one 1-hour lecture per week, and one 1-hour tutorial per week. During tutorials, a graduate tutor will guide students in discussion of course readings and/or set works, or assist with/give feedback on work in progress, where appropriate.

*See attached course syllabus for more information.*

## **MANDATORY PAPER REQUIREMENTS**

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In addition to achieving an overall pass mark of 50%, students must:

- a) submit the items of work specified for this course, on or by the specified dates (subject to such provisions as are stated for late submission of work)
- b) attend at least 80% of lectures, tutorials and workshops related to this course.

## **WORKLOAD**

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A 15-point one-trimester paper should require at least 150 hours' work (including class time). This means that in term time, the midterm break and study week you should be prepared to spend, on average, 10 hours per week involved in activities such as attending classes, reading, listening to recommended recordings and preparing assignments. Of the total 150 hours' work, you should expect to spend about 70 hours working on/completing assignments.

## ASSESSMENT

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### Approved assessment regime

The following assessment regime for this paper has been approved by the NZSM Academic Committee:

*There are 3 items of assessment:*

- 1. Between 5 and 10 minor assignments. Related to learning outcomes 1–2. (60%)*
- 2. Two in-class tests. Related to learning outcomes 1–2. (20%)*
- 3. Short creative project. Related to learning outcomes 1–3. (20%)*

### Assessment details for this offering

<i>Assessment items</i>	<i>Word length / duration</i>	<i>Learning outcome(s)</i>	<i>Due date</i>	<i>%</i>
Assignment 1	30 seconds	1	22 July 2014	6 %
Assignment 2	30 seconds	1	29 July 2014	6 %
Assignment 3	30 seconds	1	5 August 2014	6 %
Assignment 4	30 seconds	1	12 August 2014	6 %
Assignment 5	30 seconds	1, 2	19 August 2014	6 %
Test 1 (in-class)	4 pages, closed book, 40 min.	1	22 August 2014	10 %
Assignment 6	30 seconds	1, 2	16 September 2014	6 %
Assignment 7	30 seconds	1, 2	23 September 2014	6 %
Assignment 8	30 seconds	1, 2	30 September 2014	6 %
Assignment 9	30 seconds	1, 2	7 October 2014	6 %
Test 2 (in-class)	4 pages, closed book, 40 min.	1, 2	10 October 2014	10 %
Assignment 10	30 seconds	1, 2	14 October 2014	6 %
Short Creative Project	30 seconds	1, 2, 3	7 November 2014	20 %

## SUBMISSION AND RETURN OF WORK

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*Assignments should be submitted via Blackboard.*

*Marked assignments will be returned via Blackboard.*

*Assignments will normally be marked and returned as soon as possible, within three weeks of the date of submission.*

## EXTENSIONS AND PENALTIES

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Assignments must be submitted by the due dates. In fairness to other students, unless a medical certificate is produced, assessment submitted after 5:00pm on the due date will be subject to a 5% demerit on your grade, increasing by 5% each further working day it is overdue.

Students, who for exceptional reasons can justify an extension for an item of assessment, must apply to the Course Coordinator *before* the due date. Please note that no extensions can be granted for tutorial assignments.

## ASSIGNMENT PRESENTATION

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**Sonic Arts** work should be submitted as a clearly labelled Audio CD, or, for multimedia works, as a DVD or as a QuickTime data file on a data CD-ROM.

Chuck assignments submitted via Blackboard should be labelled in the following format: lastname\_assignment#.ck. Audio files submitted via Blackboard should be saved as mp3 files and labelled lastname\_assignment#.mp3.

## SCALING OF GRADES

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To obtain a fair distribution of marks relative to assignment difficulty, scaling may be employed on some or all assessment items, in accordance with guidelines set out in the VUW Assessment Handbook 2014: [www.victoria.ac.nz/documents/policy/staff-policy/assessment-handbook.pdf](http://www.victoria.ac.nz/documents/policy/staff-policy/assessment-handbook.pdf)

## MATERIALS AND EQUIPMENT AND/OR ADDITIONAL EXPENSES

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Every student requires a computer to complete this paper. You will need to download free software, which will happen on the first day of class. It is possible to complete assignments using the computers in EMS 2 and the Sonic Arts Lab, if you do not have your own computer. Students should also have a pair of headphones for lab work (headphones are provided with the NZSM computers). Student work may be stored on the EMS server. However, the NZSM is not responsible for backing up student work, and students are strongly advised to use a portable hard drive for transporting and backing up files.

## SET TEXT

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*Programming for Musicians and Digital Artists: Creating Music with ChuckK*, Ajay Kapur, Perry Cook, Spencer Salazar, Ge Wang (Manning Publications, 2014).

*All textbooks and student notes will be sold from Vic Books, Ground Floor Easterfield Building. Customers can order textbooks and student notes online at [www.vicbooks.co.nz](http://www.vicbooks.co.nz) or email an order or enquiry to [enquiries@vicbooks.co.nz](mailto:enquiries@vicbooks.co.nz). Books can be couriered to customers, or they can be picked up from nominated collection points at each campus. Customers will be contacted when they are available.*

## CLASS REPRESENTATIVE

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Class representatives for the NZSM are elected in the first week of the trimester, and their names and contact details will be available to VUWSA and/or MaWSA, the Course Coordinator and to each class. You can find out more information on Class Representatives on the VUWSA website ([www.vuwsa.org.nz](http://www.vuwsa.org.nz)) or MaWSA website ([www.mawsa.org.nz](http://www.mawsa.org.nz)).

Students may like to write the Class Rep's name and details in this box:

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## STUDENT FEEDBACK

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Enhancements made to this course, based on the feedback of previous students, will be covered during the course.

Student feedback on University courses may be found at [www.cad.vuw.ac.nz/feedback/feedback\\_display.php](http://www.cad.vuw.ac.nz/feedback/feedback_display.php)

## HUMAN ETHICS GUIDELINES

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Any student assessment or project at any level that involves human subjects (including the documenting, interviewing and recording of information from people) must follow ethics guidelines. For courses in Music Therapy, students must follow Massey University Ethics guidelines. For all other courses, students must follow VUW Ethics Guidelines. For information and assistance as it relates to your course, consult first with your Course Coordinator. Guidelines are given at:

- [www.victoria.ac.nz/research/support/research-office/ethics-approval/human-ethics](http://www.victoria.ac.nz/research/support/research-office/ethics-approval/human-ethics)
- [www.massey.ac.nz/massey/research/research-ethics/human-ethics](http://www.massey.ac.nz/massey/research/research-ethics/human-ethics)

## OTHER IMPORTANT INFORMATION

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The information above is specific to this course. There is other important information that students must familiarise themselves with, including:

- **Academic Integrity and Plagiarism:** [www.victoria.ac.nz/students/study/exams/integrity-plagiarism](http://www.victoria.ac.nz/students/study/exams/integrity-plagiarism). Find out more about plagiarism, how to avoid it, and penalties on the NZSM website: [www.nzsm.ac.nz/student-zone/student-guides](http://www.nzsm.ac.nz/student-zone/student-guides)
- **Aegrotats:** [www.victoria.ac.nz/students/study/exams/aegrotats](http://www.victoria.ac.nz/students/study/exams/aegrotats)
- **Academic Progress** (including restrictions and non-engagement): [www.victoria.ac.nz/students/study/progress/academic-progress](http://www.victoria.ac.nz/students/study/progress/academic-progress)
- **Dates and deadlines:** [www.victoria.ac.nz/students/study/dates](http://www.victoria.ac.nz/students/study/dates)
- **FHSS Student and Academic Services Office:** [www.victoria.ac.nz/fhss/student-admin](http://www.victoria.ac.nz/fhss/student-admin)
- **Grades:** [www.victoria.ac.nz/students/study/progress/grades](http://www.victoria.ac.nz/students/study/progress/grades)
- **Resolving academic issues:** [www.victoria.ac.nz/about/governance/dvc-academic/publications](http://www.victoria.ac.nz/about/governance/dvc-academic/publications)
- **Special passes:** [www.victoria.ac.nz/about/governance/dvc-academic/publications](http://www.victoria.ac.nz/about/governance/dvc-academic/publications)
- **Statutes and policies, including the Student Conduct Statute:** [www.victoria.ac.nz/about/governance/strategy](http://www.victoria.ac.nz/about/governance/strategy)
- **Student support:** [www.victoria.ac.nz/students/support](http://www.victoria.ac.nz/students/support)
- **Students with disabilities:** [www.victoria.ac.nz/st\\_services/disability](http://www.victoria.ac.nz/st_services/disability) OR [www.massey.ac.nz/massey/student-life/services-and-resources/disability-services/disability-services\\_home.cfm](http://www.massey.ac.nz/massey/student-life/services-and-resources/disability-services/disability-services_home.cfm)
- **Student Charter:** [www.victoria.ac.nz/study/apply-enrol/terms-conditions/student-charter](http://www.victoria.ac.nz/study/apply-enrol/terms-conditions/student-charter)
- **Student Contract:** [www.victoria.ac.nz/study/apply-enrol/terms-conditions/student-contract](http://www.victoria.ac.nz/study/apply-enrol/terms-conditions/student-contract)
- **Subject Librarians:** [library.victoria.ac.nz/library-v2/find-your-subject-librarian](http://library.victoria.ac.nz/library-v2/find-your-subject-librarian) AND [www.massey.ac.nz/massey/research/library/about-us/addresses-and-staff/sections/information-research-services.cfm](http://www.massey.ac.nz/massey/research/library/about-us/addresses-and-staff/sections/information-research-services.cfm)
- **Turnitin:** [www.cad.vuw.ac.nz/wiki/index.php/Turnitin](http://www.cad.vuw.ac.nz/wiki/index.php/Turnitin)
- **University structure:** [www.victoria.ac.nz/about/governance/structure](http://www.victoria.ac.nz/about/governance/structure) OR [www.massey.ac.nz/massey/home.cfm](http://www.massey.ac.nz/massey/home.cfm)
- **NZSM Student Handbook:** [www.nzsm.ac.nz/student-zone/student-guides](http://www.nzsm.ac.nz/student-zone/student-guides)
- **Scholarships and prizes relevant to NZSM students:** [www.nzsm.ac.nz/student-zone/scholarships-and-prizes](http://www.nzsm.ac.nz/student-zone/scholarships-and-prizes)
- **Your grades, academic profile, timetable, etc.:** [my.vuw.ac.nz](http://my.vuw.ac.nz)

## GENERAL NZSM POLICIES AND STATUTES

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Students should familiarise themselves with the NZSM's policies and statutes, especially those regarding Personal Courses of Study, Academic Grievances, Staff and Student Conduct. Please see [www.nzsm.ac.nz/student-zone/student-guides](http://www.nzsm.ac.nz/student-zone/student-guides)

For any statutes relating to the particular qualifications being studied, see either the Massey University Calendar or the Victoria University of Wellington Calendar.

Information about Student Services, including Academic Mentoring for Māori and Pasifika Students, and support for Students with Disabilities, is to be found in the NZSM Student Handbook (available at [www.nzsm.ac.nz/student-zone/student-guides](http://www.nzsm.ac.nz/student-zone/student-guides) or in hard copy from the NZSM offices on each campus).

## EVENTS

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Regular events are held during trimesters 1 & 2 at all NZSM campuses. These events are for the benefit of all students, and include performances, masterclasses, special lectures and workshops given by staff, students and visiting artists. All students are expected to keep time free to attend the weekly lunchtime concert on Friday at 12:10pm, along with other events as required.

Students should sign up to the **Dawn Chorus**, the NZSM's events e-newsletter, by emailing [events@nzsm.ac.nz](mailto:events@nzsm.ac.nz) with 'subscribe dawn chorus' in the subject line.

**Events & Marketing Coordinator:** Stephen Gibbs

**Phone:** (04) 463 4766      **Email:** [stephen.gibbs@nzsm.ac.nz](mailto:stephen.gibbs@nzsm.ac.nz)

**Website:** [www.nzsm.ac.nz/events](http://www.nzsm.ac.nz/events)