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| OP_logo_H_cmyk |  | School of Information Technology |

Course Directive

IN520001/IR520001 PC Maintenance

For D4LS with suggested Learning Outcomes – see red font below

# Description

The IT Essentials: PC Hardware and Software curriculum provides an introduction to the computer hardware and software skills needed to help meet the growing demand for entry-level information and communication technology (ICT) professionals. The curriculum covers the fundamentals of PC technology, networking, and security, and also provides an introduction to advanced concepts.

Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. Hands-on labs and Virtual Laptop and Virtual Desktop learning tools help students develop critical thinking and complex problem-solving skills.

# Course Information

Credits 15 credits

Prerequisites None

# Lecturer

|  |  |
| --- | --- |
| Name | Paul Admiraal |
| Role | Lecturer |
| Location | D316 |
| Phone | 03 9727212 |
| email | [Paul.Admiraal@op.ac.nz](mailto:Paul.Admiraal@op.ac.nz) |

Call in to see me at any time if you have course related concerns or questions. You may need to email for an appointment if you want to make sure I’ll be there.

# Course Dates

|  |  |
| --- | --- |
| Term 1 (9 weeks) | 16 Feb – 15 Apr |
| Mid semester break | 18 April – 1 May |
| Term 2 (7 weeks) | 2 May – 17 June |

# Course Content

### Curriculum Elements and Performance Outcomes

1. At the completion of this paper students will be able to
2. Identify, explain and install the main components of a personal computer
3. Perform standard troubleshooting procedures on typical faults (both hardware and OS)
4. Identify and perform preventative maintenance routines
5. Specify a suitable computer configuration based on the needs of a client.
6. Identify sustainability issues involved in purchasing and disposing of a computer.

Some possible Outcomes that could be added to the course

1. Demonstrate knowledge of basic networking principles (connect computers and devices to networks)
2. Navigate the computer system using command line and windows explorer – absolute and relative paths etc
3. Demonstrate an understanding of how data is ‘translated’ to human-readable form (e.g. character sets/ mark-up/xml/
4. Write a (batch) script to perform various tasks on a computer (PowerShell, and Bash?).
5. Identify, configure and troubleshoot non-standard computers (e.g Mobile Phones, Raspberry PIs etc.)
6. Demonstrate a basic understanding of Cloud and Virtual technologies and their uses

# Resources

There is a lab book **supplied** for this class. It will be handed out in class.

* **Online materials**

You will find current class materials online at <https://www.netacad.com>

**Other resources**

[The Robertson Library](http://www.otago.ac.nz/library/robertson/) is an excellent place to start, although it is important to check the publication date of books you are using. Some material dates very quickly. The Internet has many reference and tutorial sites. If you require additional material please ask for suggestions.

# Schedule (Subject to change)

|  |  |  |
| --- | --- | --- |
| **Week.** | **Chapter** | **Topic** |
| 1. | 1 | Introduction to the PC |
| 2. | 2 | Lab Procedures and Tool Use |
| 3 | 3 | Computer Assembly |
| 4. | 4 | Overview – Preventative Maintenance |
| 5. | 5 | Windows Installation |
| 6. | 6 | Windows configuration and Management |
| 7. | 7 | Networking Concepts |
| 8. | 8 | Applied Networking \*\*Chap 1-8 Test\*\* |
| 9 | 9 | Laptops and Mobile Devices |
|  | Mid semester break | Batch Script Assignment Handed out |
|  | Mid semester break |  |
| 10. | 10 | Mobile, Linux and OS X Operating Systems  Batch Script Assignment Due |
| 11. | 11 | Printers |
| 12. | 12 | Security |
| 13. | 13 | The IT Professional |
| 14. | 14 | Advanced Troubleshooting |
| 15 |  | Special Topic |
| 16. |  | Practical and Theory Exam |

**N.B.** This schedule is subject to change depending on class feedback and/or circumstances beyond our control.

# Timetable

Each student will be assigned a stream. Each stream has two sessions per week:

|  |  |  |
| --- | --- | --- |
| Stream A | Tuesday  1:00pm – 3:00 pm  D312 | Thursday  1:00pm – 3:00 pm  D312 |
| Stream B | Wednesday  8:00am –10:00 am  D312 | Friday  8:00am –10:00 am  D312 |

# Assessment

As this is a Cisco based course, only one assessment will be entered into EBS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Assessment &**  **Learning Outcome** | **Component** | **Indiv**  **/Group** | **Due Date** | **Weighting** |
| **Lab Work**  - All learning outcomes |  | Individual and Group | Each Week | 20% (collectively)\* |
| **Assignment** | Batch Script | Individual | Week 10 | 10% |
| **Chapter Quizzes** |  | Individual | Each Week | 20% |
| **Theory Exams** |  | Individual | Week 8 & 16 | 20% |
| **Practical Exam** |  | Individual | Week 16 | 30% |

**\*** Each lab can get up to 4 marks, as follows:

1. Has been submitted, limited effort apparent, many gaps in required tasks
2. Bare minimum effort, some tasks completed to a basic level
3. Good effort is clear, most aspects completed to a reasonable standard
4. Solid work, all tasks completed to a high standard, extra effort evident

### Submission requirements

* Students should keep a copy of all submitted work.
* Your lab book needs to be signed off each week, do not lose it!

### Criteria for Passing

Cisco has its own grading scale which is different to the grading scale used in the OP BIT. Your grade will be converted to the OP grading scale as shown in the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| If your Cisco Weighted Score is: | Then your Grade is | | And your BIT Score is |
| 90.0 – 100 |  | A+ | 95.0 |
| 87.5 – 89.9 |  | A | 87.5 |
| 85.0 – 87.4 |  | A- | 82.5 |
| 82.5 – 84.9 |  | B+ | 77.5 |
| 80.0 – 82.5 |  | B | 72.5 |
| 77.5 – 79.9 |  | B- | 67.6 |
| 75.0 – 77.4 |  | C+ | 62.5 |
| 72.5 – 74.9 |  | C | 57.5 |
| 70.0 – 72.4 |  | C- | 52.5 |

* **You must achieve a final grade of C- or better to pass the class**

# Course Requirements and Expectations

# Attendance

* + Students are expected to attend all classes, both lectures and labs.
  + If you miss a class you will need to get notes from another student.
  + If you cannot attend for a few days for any reason, please contact your lecturer.
  + You must turn up ready for assessments on the due date and at the correct time. No extra time will be scheduled. If you do not turn up, you have failed the assessment.

# Course Interruptions

On rare occasions the polytechnic may be closed (snow, power outage, zombie apocalypse etc). If this occurs we will endeavour to continue with the course as best we can. This may involve online delivery.

If you think that the polytechnic may be closed then check that it is (don’t assume). Otago Polytechnic will announce any closures on:

* + More FM 87.4, their cancellation line phone number is 03 471 7555
  + The Contact Centre 0800 762 786
  + An informal announcement may be made on <https://www.facebook.com/OtagoPoly>

You should then check your email for alternative arrangements. We may continue the class online.

## Group work and originality

Students in the Bachelor of Information Technology degree are expected to hand in original work. Students are encouraged to discuss assignments with their fellow students, however, all assignments are to be completed as individual works unless group-work is ***explicitly*** required (i.e. if it doesn’t say it is group-work then it is not group-work – even if a group consultation was involved). Failure to submit your own unique work will be treated as plagiarism.

## Referencing

Appropriate referencing is required for all work. Referencing standards will be specified by your lecturer.

## Plagiarism

Plagiarism is submitting someone else’s work as your own. Plagiarism offences are taken seriously and an assessment that has been plagiarised may be awarded a zero mark. A definition of plagiarism is in the Student Handbook, available online or at the School office.

## Submission requirements

All assignments are to be submitted by the time, date, and method given when the assignment is issued. Failure to meet all requirements may result in a penalty of up to 5% per day (including weekends).

## Extensions

Extensions are only available for unusual circumstances. These must be applied for, and approved, *prior* to the submission deadline.

## Impairment

In case of sickness contact, your lecturer or year co-ordinator as soon as possible, preferably before the test or assignment is due. The policy regarding the granting of a mark that considers impaired performance requires a medical certificate and a medical practitioner’s signature on a form. You should refer to the guide on impaired performance on the student handbook.

## Appeals

If you are concerned about any aspect of your assessment, please approach the lecturer in the first instance. We support an open door policy and aim to resolve issues promptly. Further support is available from Year Co-ordinators, Programme Manager and Head of School. Otago Polytechnic has a formal process for academic appeals if necessary.

# Other Documents

Regulatory documents relating to this course can be found on the Polytechnic website.