FIT5010
Network protocols standards

Unit Guide

Semester 2, 2014

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Table of Contents

FIT5010 Network protocols standards - Semester 2, 2014

In-depth coverage of the protocols used to operate the Internet and intranets, and a selection of major applications, including specific implementations of the protocols and systems. The topics include: Advanced Internet Addressing: IPv6, subnetting, supernetting. TCP Performance and Enhancements: Reno, New-Reno, Fast Retransmit and Recovery, etc. Unicast and multicast routing protocols: BGP4, OSPF, MOSPF, DVMRP, etc. Messaging systems: SMTP, MIME, POP3, IMAP, World Wide Web systems: client-server implementations, HTTP, Real Time Protocols: RTP, RTCP, RSVP. Security and Firewall. Quality of Service issues: DiffServ and IntServ. Network management and Remote File activities.

Mode of Delivery

Caulfield (Day)

Workload Requirements

Minimum total expected workload equals 12 hours per week comprising:

(a.) Contact hours for on-campus students:

- Two hours of lectures
- One 2-hour tutorial

(b.) Additional requirements (all students):

- A minimum of 8 hours independent study per week for completing lab and project work, private study and revision.

Unit Relationships

Prerequisites

((FIT5131 or FIT9017) and (FIT5134 or FIT9018) and (FIT5132 or FIT9003 or FIT9019) and (FIT5135 or FIT9020) and (FIT5136 or FIT4037) and (FIT5130 or FIT9030)) or equivalent

Chief Examiner

Professor Balasubramaniam Srinivasan

Campus Lecturer

Caulfield

Colin Enticott

Your feedback to Us

Monash is committed to excellence in education and regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through the Student Evaluation of Teaching and Units (SETU) survey. The University's student evaluation policy requires that every unit is evaluated each year. Students are strongly encouraged to complete the surveys. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

For more information on Monash's educational strategy, see:

www.monash.edu.au/about/monash-directions/ and on student evaluations, see:
www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html

Previous Student Evaluations of this Unit

For the first time in 2011 this unit included a research topic and presentation to the entire class. Student feedback indicated that this provided a broader perspective of Internet Protocols and their applications. This will continue to be included for this year.

If you wish to view how previous students rated this unit, please go to
https://emuapps.monash.edu.au/unitevaluations/index.jsp

Academic Overview

Learning Outcomes

At the completion of this unit students will:

- have a well-developed conceptual framework, enabling them to keep pace with developments in the rapidly changing field of network computing;
- have a thorough understanding of one or more specialised areas of study within network computing;
- be familiar with using current technology, systems and software relevant to network computing;
- be able to practise professionally as a network computing specialist.

Unit Schedule

Week	Activities	Assessment
0	Review knowledge of Data Communications and Networks before coming to the first lecture	No formal assessment and activities are undertaken in Week 0
1	Internet Architecture Technology	
2	Addressing	Research Topic assigned in Week 2
3	Internet Control Messages	
4	TCP/UDP	
5	Routing	
6	Applications I	
7	Applications II	
8	IPv6	Research Topic Report due
9	Mid-semester Test	Mid-semester Test
10	Research Topic Presentations I	Research Topic Presentation in lecture (to be scheduled)
11	Research Topic Presentations II	Research Topic Presentation in lecture (to be scheduled)
12	Research Topic Presentations III	Research Topic Presentation in lecture (to be scheduled)
	SWOT VAC	No formal assessment is undertaken in SWOT VAC
	Examination period	LINK to Assessment Policy: http://policy.monash.edu.au/policy-bank/academic/education/assessment/assessment-in-coursework-policy.html

*Unit Schedule details will be maintained and communicated to you via your learning system.

Teaching Approach

Lecture and tutorials or problem classes

This teaching and learning approach provides facilitated learning, practical exploration and peer learning.

Assessment Summary

Examination (2 hours): 50%; In-semester assessment: 50%

Assessment Task	Value	Due Date
Mid-semester Test	25%	Week 9
Research Topic (Report and Presentation)	25% (Report 15%, Presentation 5%, Peer Evaluation 5%)	Report due Week 8; Presentation in Week 10, 11 or 12 lecture (to be scheduled)
Examination 1	50%	To be advised

Unit Schedule

Assessment Requirements

Assessment Policy

Faculty Policy - Unit Assessment Hurdles
(http://intranet.monash.edu.au/infotech/resources/staff/edgov/policies/assessment-examinations/assessment-hurd

Academic Integrity - Please see resources and tutorials at
http://www.monash.edu/library/skills/resources/tutorials/academic-integrity/

Assessment Tasks

Participation

- **Assessment task 1**

  Title:
  > Mid-semester Test

  Description:
  > A multiple choice / short answer paper to test the understanding of the conceptual
  > principles of the internet and how it operates.

  Weighting:
  > 25%

  Criteria for assessment:
  > Understanding of the principles, as well their application to real world situations and
  > problems, is demonstrated.

  Due date:
  > Week 9

- **Assessment task 2**

  Title:
  > Research Topic (Report and Presentation)

  Description:
  > Each student will be given a random topic that is the related to the unit. Students need to
  > do research in the library as well as on the internet, submit a written report in Week 8 and
  > make a presentation of 30 - 40 minutes to the entire class. The topic for this study will be
  > assigned in Week 2.
  >
  > The written report will be marked by the lecturer/tutor for its content, analysis and
  > conclusion. The presentation will be evaluated by the lecturer, tutor and the students in
  > the class.

  Weighting:
  > 25% (Report 15%, Presentation 5%, Peer Evaluation 5%)

  Criteria for assessment:
  > Written report and presentation:
  >
  > 1. Quality of content
  > 2. Depth of analysis
  > 3. Quality of conclusion

  Due date:
  > Report due Week 8; Presentation in Week 10, 11 or 12 lecture (to be scheduled)

Examinations

- **Examination 1**

  Weighting:
  > 50%
  Length:
  > 2 hours
  Type (open/closed book):
  > Closed book
  Electronic devices allowed in the exam:
  > None

Learning resources

Monash Library Unit Reading List (if applicable to the unit)
http://readinglists.lib.monash.edu/index.html

Faculty of Information Technology Style Guide

Feedback to you

Examination/other end-of-semester assessment feedback may take the form of feedback classes, provision of sample answers or other group feedback after official results have been published. Please check with your lecturer on the feedback provided and take advantage of this prior to requesting individual consultations with staff. If your unit has an examination, you may request to view your examination script booklet, see
http://intranet.monash.edu.au/infotech/resources/students/procedures/request-to-view-exam-scripts.html

Types of feedback you can expect to receive in this unit are:

- Informal feedback on progress in labs/tutes
- Graded assignments with comments
- Test results and feedback
- Solutions to tutes, labs and assignments

Extensions and penalties

Submission must be made by the due date otherwise penalties will be enforced.

You must negotiate any extensions formally with your campus unit leader via the in-semester special consideration process: http://www.monash.edu.au/exams/special-consideration.html

Returning assignments

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Assignment submission

It is a University requirement
(http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-academic-integrity-managing-pla
for students to submit an assignment coversheet for each assessment item. Faculty Assignment
coversheets can be found at http://www.infotech.monash.edu.au/resources/student/forms/. Please check
with your Lecturer on the submission method for your assignment coversheet (e.g. attach a file to the
online assignment submission, hand-in a hard copy, or use an online quiz). Please note that it is your
responsibility to retain copies of your assessments.

Online submission

If Electronic Submission has been approved for your unit, please submit your work via the learning
system for this unit, which you can access via links in the my.monash portal.

Other Information

Policies

Monash has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University's academic standards, and to provide advice on how they might uphold them. You can find Monash's Education Policies at:
www.policy.monash.edu.au/policy-bank/academic/education/index.html

Key educational policies include:

- Student Academic Integrity Policy and Student Academic Integrity: Managing Plagiarism and Collusion Procedures ;
  http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-academic-integrity-policy.h
- Assessment in Coursework Programs;
  http://www.policy.monash.edu/policy-bank/academic/education/assessment/assessment-in-coursework-po
- Special Consideration;
  http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.ht
- Grading Scale;
  http://www.policy.monash.edu/policy-bank/academic/education/assessment/grading-scale-policy.html
- Discipline: Student Policy;
  http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-discipline-policy.html
- Academic Calendar and Semesters; http://www.monash.edu.au/students/dates/
- Orientation and Transition; http://intranet.monash.edu.au/infotech/resources/students/orientation/
- Academic and Administrative Complaints and Grievances Policy;
  http://www.policy.monash.edu/policy-bank/academic/education/management/complaints-grievance-policy.h

Faculty resources and policies

Important student resources including Faculty policies are located at
http://intranet.monash.edu.au/infotech/resources/students/

Graduate Attributes Policy

http://www.policy.monash.edu/policy-bank/academic/education/management/monash-graduate-attributes-policy.h

Student Charter

www.opq.monash.edu.au/ep/student-charter/monash-university-student-charter.html

Student services

The University provides many different kinds of support services for you. Contact your tutor if you need advice and see the range of services available at http://www.monash.edu.au/students. For Malaysia see http://www.monash.edu.my/Student-services, and for South Africa see http://www.monash.ac.za/current/.

Monash University Library

The Monash University Library provides a range of services, resources and programs that enable you to save time and be more effective in your learning and research. Go to www.lib.monash.edu.au or the library tab in my.monash portal for more information. At Malaysia, visit the Library and Learning Commons at http://www.lib.monash.edu.my/. At South Africa visit http://www.lib.monash.ac.za/.

Disability Liaison Unit

Students who have a disability or medical condition are welcome to contact the Disability Liaison Unit to discuss academic support services. Disability Liaison Officers (DLOs) visit all Victorian campuses on a regular basis.

- Website: http://www.monash.edu/equity-diversity/disability/index.html
- Telephone: 03 9905 5704 to book an appointment with a DLO; or contact the Student Advisor, Student Commuity Services at 03 55146018 at Malaysia
- Email: dlu@monash.edu
- Drop In: Equity and Diversity Centre, Level 1, Building 55, Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Malaysia Campus