# Changes to CSE Degrees

for CSE EdC, July 8 2016

# Why the Changes?

- prompted by ...
  - new core syllabus (from Jingling's WG)
  - accreditation requirements (ACS/EngAust)
    - CBA $$$ for Security Stream
- needed revision of ...
  - BE(Hons) streams, CS program (+Sec), MIT program
- starting in 17s1  (CS maybe 17s2)

# New CS Degree

- incorporate new courses (incl. capstone)
- revise “majors” as complete streams
  - allowing re-use in other contexts e.g. dual awards
- try to ensure same degree of flexibility
- some streams dropped
- some former core courses now elective

# New BE(Hons) Degrees

- Bioinformatics/Computer/Software Engineering
- all BE(Hons) degrees are majors under 3707
- needed to incorporate new courses
- required re-arrangement of some schedules

# New MIT Programs

- current program very flexible, only one core
- ACS required guaranteed core + capstone
- defined core (based on de facto existing core)
- defined streams as core + prescribed electives
- added capstone project course (no new courses otherwise)

# New Courses

- COMP1511 Intro to Programming (C)
- COMP1521 Comp Systems Fundamentals (C,Asm)
- COMP1531 Software Eng Fundamentals (Python)
- COMP2511 OO Design and Programming (Java)
- COMP2521 Data Structs and Algorithms (C)
- **all** students in **all** CSE programs take these

# New Courses (cont)

- COMP3900 Computer Science Project
  - capstone course for CS program
- COMP9900 Information Technology Project
  - capstone course for MIT program
- both are team-based system-building courses

# New Courses (cont)

- COMP6[48]41 (Extended) Security Engineering
- COMP6[48]43 (Extended) Web App Security & Testing
- COMP6[48]45 (Extended) Digital Forensics
- COMP6447 System & Software Security Assessment
- COMP6448 Security Engineering Masterclass
- COMP6449 Security Engineering Professional Practice

# Retired Courses

- COMP1917 Computing 1 (to COMP1511)
- COMP1927 Computing 2 (to COMP2521)
- COMP2911 Eng Design … (to COMP2511)
- SENG1031 SE Workshop 1 (revised SE Workshops)

# New CompSci Rules

- total 144UOC, 3 years full-time
- must take one of the following majors (all 96UOC)
  - COMPA1 Computer Science (default)
  - COMPD1 Database Systems
  - COMPE1 Electronic Commerce
  - COMPI1 Artificial Intelligence
  - COMPJ1 Programming Languages (new)
  - COMPN1 Computer Networks
  - COMPY1 Security Engineering (new)
- 6 x Free Electives, 2 x GenEd

# New CompSci Rules (cont)

Core:

- COMP1511, COMP1521, COMP1531
- COMP2511, COMP2521, COMP3121
- COMP3900, COMP4920
- MATH1081, MATH11x1, MATH12x1

Note: dropped COMP2121 and COMP2041 as core

# New CompSci Rules (cont)

COMPA1 stream (default)

- Core + 5 x COMP3+

COMPD1 (Database) stream

- Core + COMP3311 + 3 x DB Electives + COMP3+

COMPN1 (Networks) stream

- Core + COMP3331 + 3 x Net Electives + COMP3+

Other streams have similar structure

Note: dropped Streams with insufficient electives: *Games*, *HCI*, *Robotics*

# New BE (Hons) Rules

- All BE(Hons) streams are 168 UOC
- Core:
  - COMP1511, COMP1521, COMP1531
  - COMP2511, COMP2521, Ethics, Thesis
  - MATH1081?, MATH11x1, MATH12x1
- $x<3$ x Free Electives, 2 x GenEd
- rest depends on major (BINF, CompENG, SENG)

# New BE Stream Rules

## Bioinformatics Engineering (BINFAH)

- Core + BINFxx + Bio + Chem + … + 12UOC COMP3+

## Computer Engineering (COMPBH)

- Core + COMPxx + Elec + Phys + … 30UOC COMP3+

## Software Engineering (SENGAH)

- Core + SENGxx + COMP2xx + … 24UOC COMP3+

# New MIT Rules

Core

- COMP9021, COMP9024, COMP9311, COMP9331
- GSOE9820, COMP9900

Electives

- 10 x COMP4+ electives  (determined by major)
- above must include 6 x Advanced Disciplinary (AQF9)

# New MIT Majors

- COMPCS - Information Technology (96UOC)
- COMPBS - Bioinformatics (96UOC)
- COMPDS - Database Systems (96UOC)
- COMPES - e-Commerce Systems (96UOC)
- COMPGS - Geospatial Systems (96UOC)
- COMPIS - Internetworking (96UOC)
- COMPSS - Data Science & Engineering (96UOC)

# New MIT Majors (cont)

COMPCS major (default)

- Core + 10 x COMP4+ electives

COMPDS (Database) stream

- Core + 3 x DB Electives + 7 x COMP4+ electives

COMPIS (AI) stream

- Core + COMP9414 + 3 x AI Electives + 6 x COMP4+ electives

Other streams have similar structure