BINUS UNIVERSITY

SCHOOL OF COMPUTER SCIENCE

Jakarta, March 12th, 2014
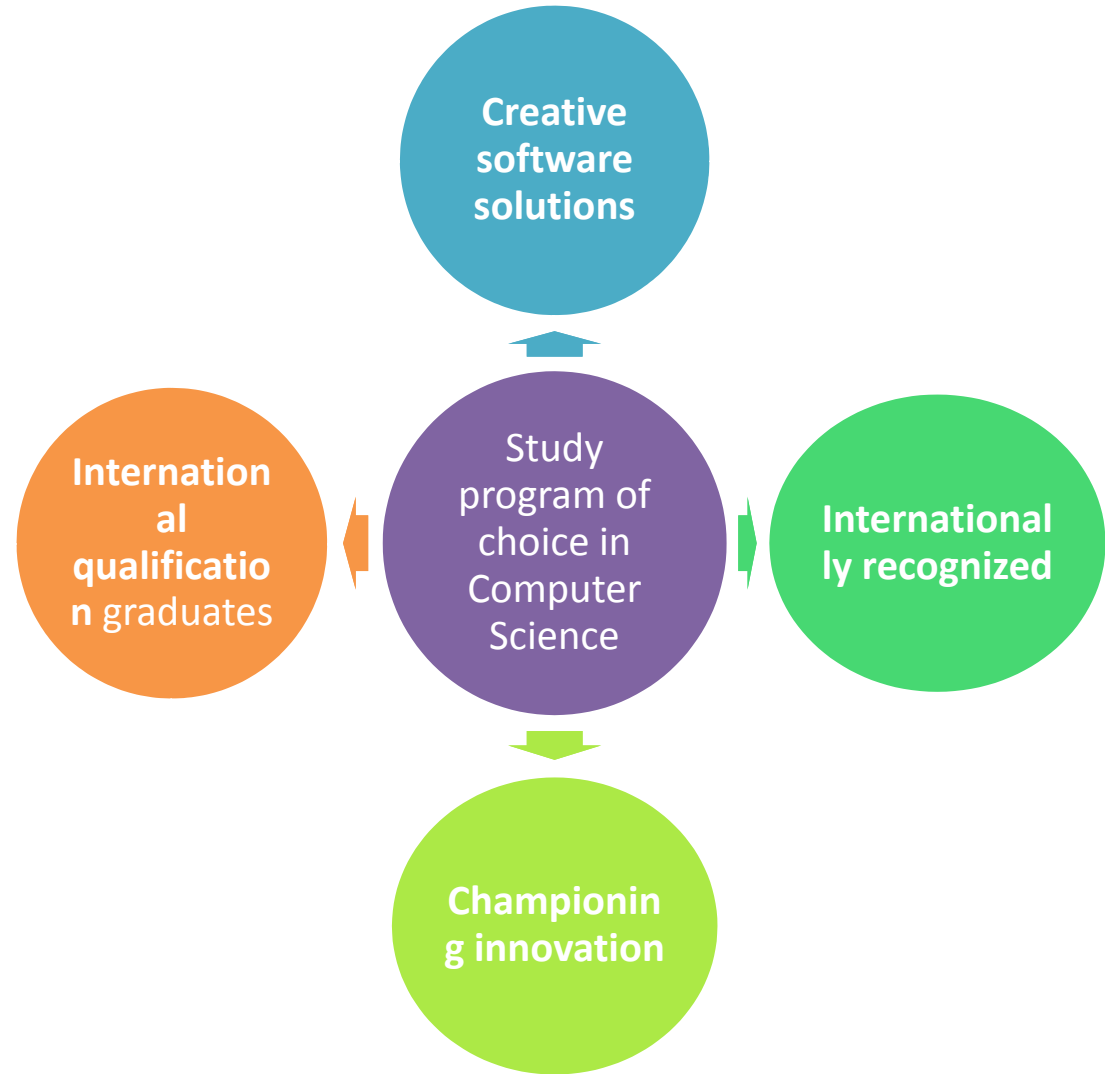
CONCENTRATION @CS

Competencies, Subjects and Conditions
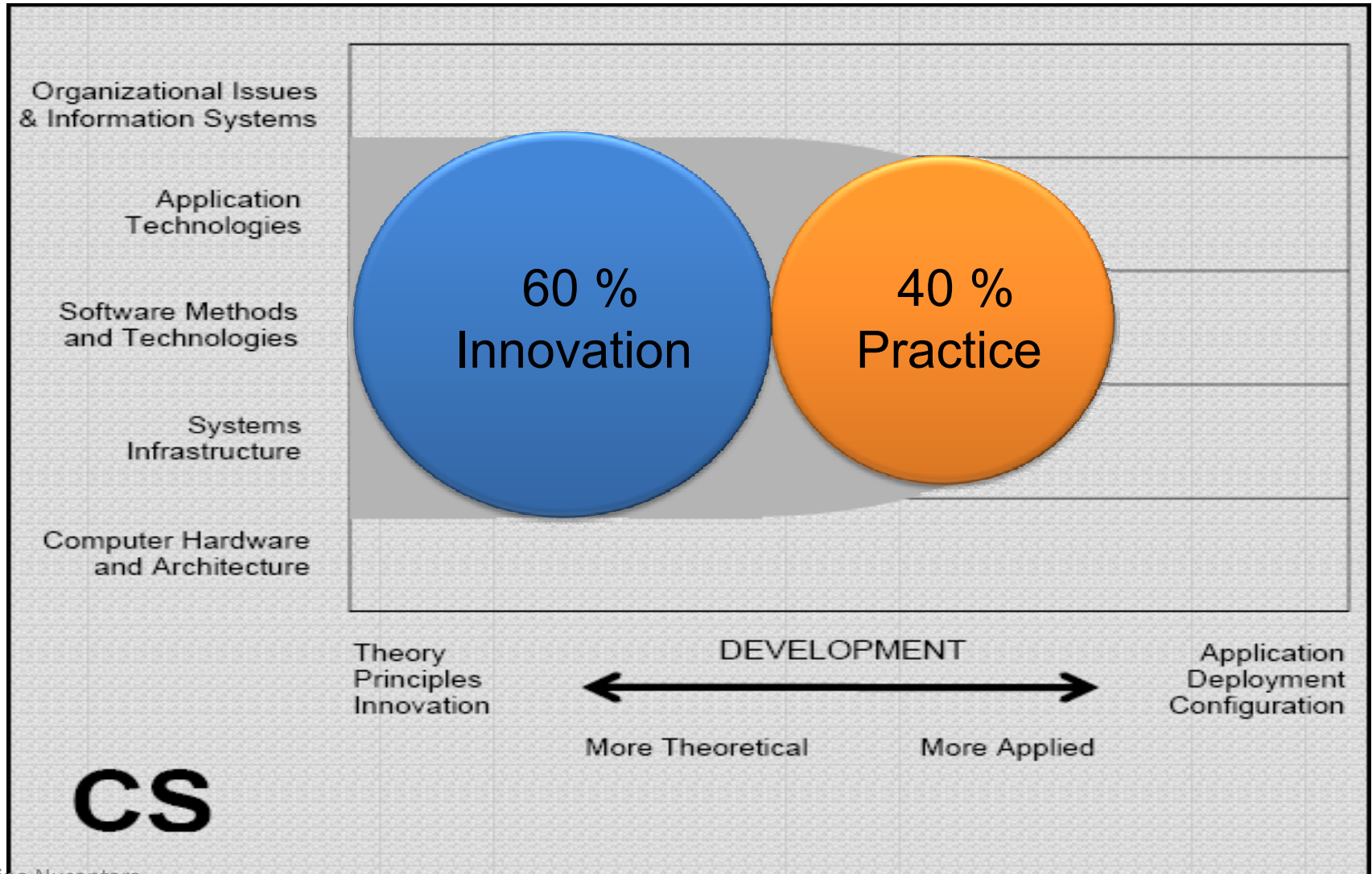
To concentrate and shape your competencies to face the Global Employability

Computer Science Program

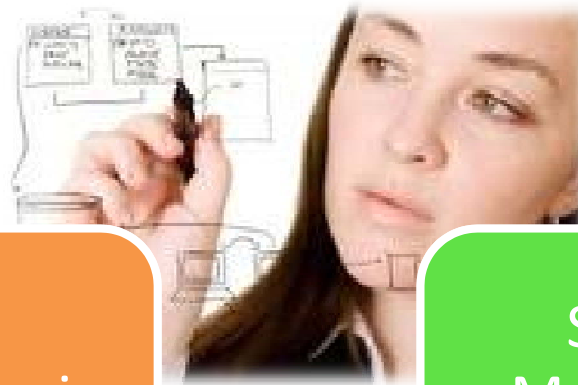# COMPUTER SCIENCE (ACM CURRICULA 2005)

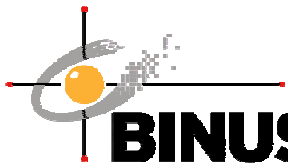**BINUS** UNIVERSITY

SCHOOL OF COMPUTER SCIENCE

COMPUTER SCIENCE

SINCE 1987

Application Technology

Systems Infrastructure in ICT development

Software Methods and Technology
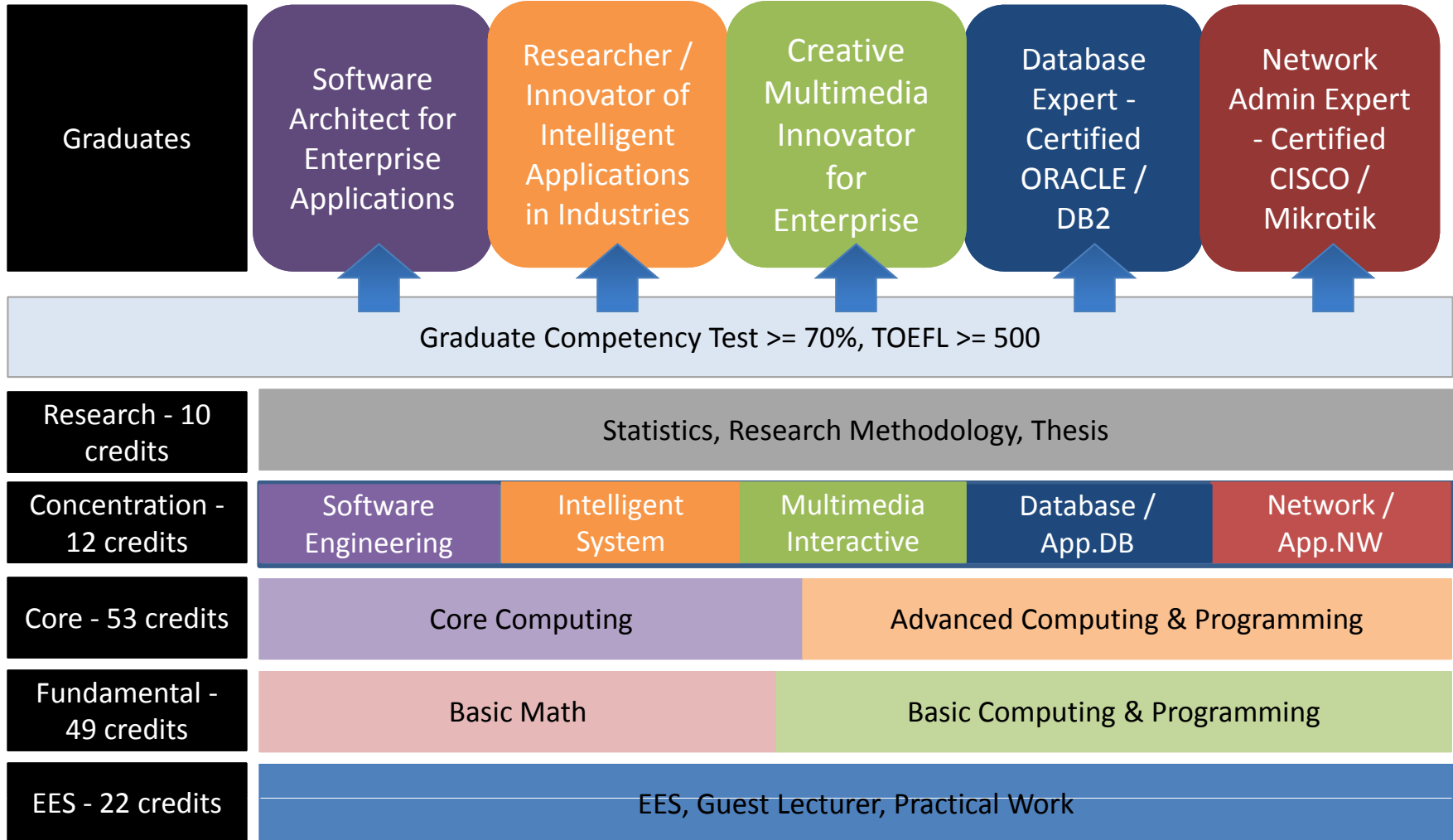
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SCHOOL OF COMPUTER SCIENCE

CURRICULUM STRUCTURE

Graduates	Software Architect for Enterprise Applications	Researcher / Innovator of Intelligent Applications in Industries	Creative Multimedia Innovator for Enterprise	Database Expert - Certified ORACLE / DB2	Network Admin Expert - Certified CISCO / Mikrotik

Graduate Competency Test >= 70%, TOEFL >= 500

Research - 10 credits	Statistics, Research Methodology, Thesis				
Concentration - 12 credits	Software Engineering	Intelligent System	Multimedia Interactive	Database / App.DB	Network / App.NW
Core - 53 credits	Core Computing		Advanced Computing & Programming		
Fundamental - 49 credits	Basic Math		Basic Computing & Programming		
EES - 22 credits	EES, Guest Lecturer, Practical Work				

SOFTWARE ENGINEERING

Software Engineering (T1414)

Explore the various methodologies and tools for software development

Competencies :

To be able to engineer big scale software application using the correct and complete development methodology

SOFTWARE ENGINEERING

SUBJECTS

- Object Oriented Software Engineering
- Software Project Management
- Advanced Topic in S/W Engineering
- Current Popular IT I (**.NET Technology**)

THESIS Topics

- Web e-Application
- Mobile Application
- Web Technology

SOFTWARE ENGINEERING

Management

- **Chief Technology Officer**
- **Chief Information Officer**
- **IT Consultant**

System Development

- **Project Manager**
- **Systems Analyst**
- **Systems Administrator**
- **Systems Programmer**
- **Applications Programmer**

Web Specialist

- **Web Designer**
- **Web Programmer**
- **Web Administrator**

Scientist

- **Lecturer / Trainer**
- **Researcher**

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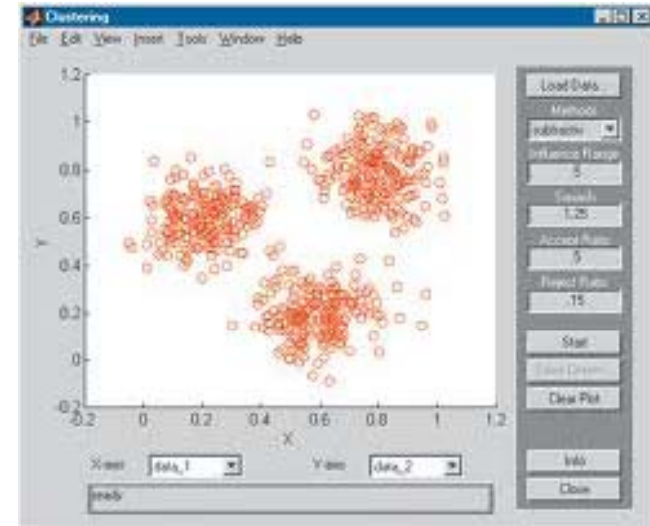
INTELLIGENT SYSTEM

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Artificial Intelligence (T0264)

Explore various techniques of computer intelligence that can be applied to solve a problem

Competencies :

To be able to apply intelligence technique in varied application

INTELLIGENCE SYSTEM

SUBJECTS

- Expert Systems
- Neuro Computing
- Computer Vision
- Current Popular IT III (Fuzzy Logic)

THESIS Topics

- Expert Systems based Application
- Neural Network based Application
- Computer Vision based Application
- Natural Language based Application

INTELLIGENCE SYSTEM

Management

- **Chief Technology Officer**
- **Chief Information Officer**
- **IT Consultant**

Intelligence System Development

- **Intelligence System Developer**

Scientist

- **Lecturer / Trainer**
- **Researcher**

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INTERACTIVE MULTIMEDIA

Multimedia System (T0553)

Explore the various methodologies and tools of multimedia-based application development

Competencies :

To be able to engineer a multimedia based application

INTERACTIVE MULTIMEDIA

SUBJECTS

- Multimedia Programming Foundation (JAVA)
- Game Design and Programming (Java Monkey Engine)
- Multimedia 3D Modelling and Animation
- Current Popular IT V

THESIS Topics

- Multimedia based Application
- Computer Aided Instructional
- Game

INTERACTIVE MULTIMEDIA

Management

- **Chief Technology Officer**
- **Chief Information Officer**
- **IT Consultant**

Multi Media

- **Multimedia Designer**
- **Multimedia Engineer**
- **Game Engineer**
- **Game Designer**

Scientist

- **Lecturer / Trainer**
- **Researcher**

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DATABASE TECHNOLOGY

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SUBJECTS

- Design Database
- Web Database
- Data Warehouse
- Current Popular IT II (DB2 Database Server)

THESIS Topics

- Database Design
- Database Programming
- Data Warehouse Application
- Geographic Information System

Majors

- CS or IS

Conditions :

- TOEFL >= 500
- IPK >= 3,25 (IPK semester 3)
- Capacity : 2 classes @ 30 students
- If the capacity cannot hold the number of students who choose Applied Database, students will be ranked by the score of pre-requisite subjects
- If you meet the pre-requisite, however you're score for pre-requisite subjects are out of rank, then you can choose another concentration

DATABASE TECHNOLOGY & APPLIED DATABASE

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Management

- **Chief Technology Officer**
- **Chief Information Officer**
- **IT Consultant**

Database Specialist

- **Database Designer**
- **Database Programmer**
- **Database Administrator**

Scientist

- **Lecturer / Trainer**
- **Researcher**

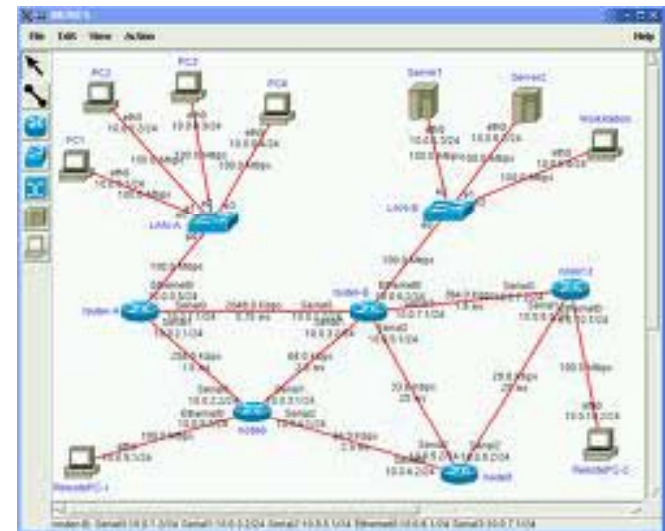back

NETWORKING

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Computer Network (H0515) – Grade B

Explore the field of computer networks include installation, administration and management

Competencies :

To be able to design, implement and manage a computer network correctly that required by organization

NETWORKING

SUBJECTS

- Network Management
- Network Security
- Network Programming
- Current Popular IT IV (Network Admin w/ Windows/Linux)

THESIS Topics

- Network Programming
- Socket Programming
- Network based Application

APPLIED NETWORKING

Algorithm & Programming (T0016) – Grade A

Computer Network (H0515) – Grade A

Explore network technology which based on CISCO technology and equipment

Competencies :

Have skill and knowledge on how to manage a CISCO based computer network

APPLIED NETWORKING

SUBJECTS

- Applied Networking I
- Applied Networking II
- Applied Networking III

THESIS Topics

- Network Programming
- Socket Programming
- Network based Application

Majors

- CS or CE

Conditions :

- TOEFL >= 500
- IPK >= 3,25 (IPK semester 3)
- Capacity : 2 classes @ 24 students
- If the capacity cannot hold the number of students who choose Applied Networking, students will be ranked by the score of pre-requisite subjects
- If you meet the pre-requisite, however you're score for pre-requisite subjects are out of rank, then you can choose another concentration

APPLIED NETWORKING
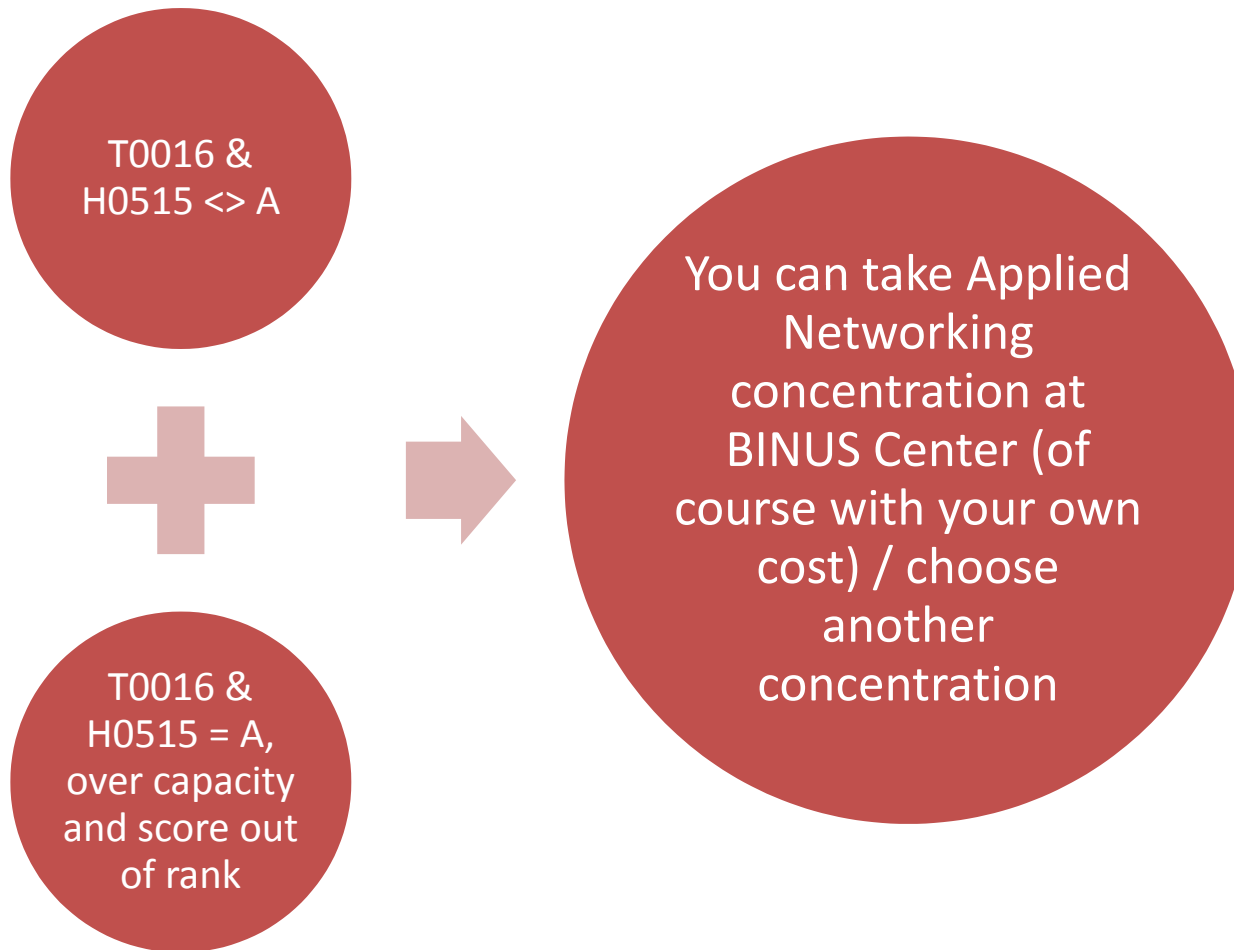
T0016 & H0515 <> A

T0016 & H0515 = A, over capacity and score out of rank

You can take Applied Networking concentration at BINUS Center (of course with your own cost) / choose another concentration

NETWORKING & APPLIED NETWORKING

BINUS UNIVERSITY
SCHOOL OF COMPUTER SCIENCE

Management
- Chief Technology Officer
- Chief Information Officer
- IT Consultant

Network Specialist
- Networks Designer
- Networks Administrator

Network Specialist (CISCO)
- Networks Designer
- Networks Administrator

Scientist
- Lecturer / Trainer
- Researcher

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SKS FEE FOR APPLIED DB & APPLIED NW

Subjects	Execution SKS	Acknoledged SKS
Applied DB/NT - 1	0/8	0/4
Applied DB/NT - 2	0/8	0/4
Applied DB/NT - 3	0/8	0/4
Total	24	12

Special SKS fee will be applied and charged based on the number of Execution SKS

→

Special SKS Fee = Normal SKS fee + Additional Cost

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Only those 3 subjects will be charged with special SKS Fee

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Unlimited Number of Class Concentration

- Software Engineering   @ 70 students / class
- Database Technology   @ 70 students / class
- Intelligence System   @ 70 students / class
- Interactive Multimedia   @ 70 students / class

Limited Number of Class Concentration

- Networking   6 classes @ 70 students / class
- Applied Networking   2 classes @ 24 students / class
- Applied Database   2 classes @ 30 students / class

Program	Capacity	Notes
Regular - Kemanggisan	Mins 30 students / class	-
Regular - Alam Sutera	Mins 30 students / class	If the number of students choosing the concentration is less than minimal capacity
Smart - Kemanggisan & Alam Sutera	Mins 10 students / class	**Option 1** : choose other concentration **Option 2** : join the concentration in the Kemanggisan Campus or will be arranged by HoP

- You will choose 2 concentrations as your concentration priorities. Choose wisely, since it will determine your future.
- Students that are not accepted in their first priority, will be considered to be accepted in their second priority, but still considering the capacity of the class and pre-requisite subject grade (if any)
- Students who decide not to choose any concentrations, then their concentration will be determined by HoP by considering the pre-requisite subject grades and class capacity
- If there are any other things have not been mentioned above, the concentration of the student will be determined by HoP

Selection

Priority Option + Pre-Requisite Subject Score (if any)

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CONCENTRATION BASED SEMINARS
KEMANGGISAN CAMPUS

Concentration	Speaker	Dates	Location
Software Engineering	Aditya Kurniawan, S.Kom, MMSI	Thursday, 20 March 2014 11:20 – 13:00	Exhibition Hall Lt 3 Kampus Anggrek
Intelligence Systems	Derwin Suhartono, S.Kom, MTI	Wednesday, 19 March 2014 09:20 – 11:00	L1B Kampus Syahdan
Database / Applied Database	Edy Irwansyah, ST., M.Si.	Thursday, 20 March 2014 13:20 – 15:00	Exhibition Hall Lt 3 Kampus Anggrek
Networking / Applied Network	Bayu Kanigoro, S.Kom, M.T	Thursday, 20 March 2014 09:20 – 11:00	Exhibition Hall Lt 3 Kampus Anggrek
Interactive Multimedia	Rhio Sutoyo, S.Kom, M.Sc.	Wednesday, 19 March 2014 15:20 – 17:00	Exhibition Hall Lt 3 Kampus Anggrek

CONCENTRATION BASED SEMINARS
ALAM SUTERA CAMPUS

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Seminar	Speaker	Dates	Location
Interactive Multimedia	Rhio Sutoyo, S.Kom, M.Sc.	Tuesday, 18 March 2014 15:20 – 17:00	ASB 13
Networking / Applied Network	Bayu Kanigoro, S.Kom, M.T	Monday, 17 March 2014 13:20 – 15:00	ASB 6
Database / Applied Database	Zulfany E. Rasjid, BSc, MMSI	Monday, 17 March 2014 13:20 – 15:00	ASB 6
Intelligence Systems	Derwin Suhartono, S.Kom, MTI	Tuesday, 18 March 2014 11:20 – 13:00	ASB 13
Software Engineering	Aditya Kurniawan, S.Kom, MMSI	Monday, 17 March 2014 09:20 – 11:00	ASB 7

SCHOOL OF COMPUTER SCIENCE

Please go to School of Computer Science web

http://socs.binus.ac.id

For more information, article and journal regarding concentration

THANK YOU

Building future for our next generation

Computer Science Program