



جامعة الملك فهد للبترول والمعادن
King Fahd University of Petroleum & Minerals
تقنية المعلومات والاتصالات
Information & Communications Technology

ICT Services and Projects

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المشرف علي تقنية المعلومات والاتصالات

دعم التميز عبر التقنية
Supporting Excellence via Technology



Supervisor, Information and Communications Technology (SICT)

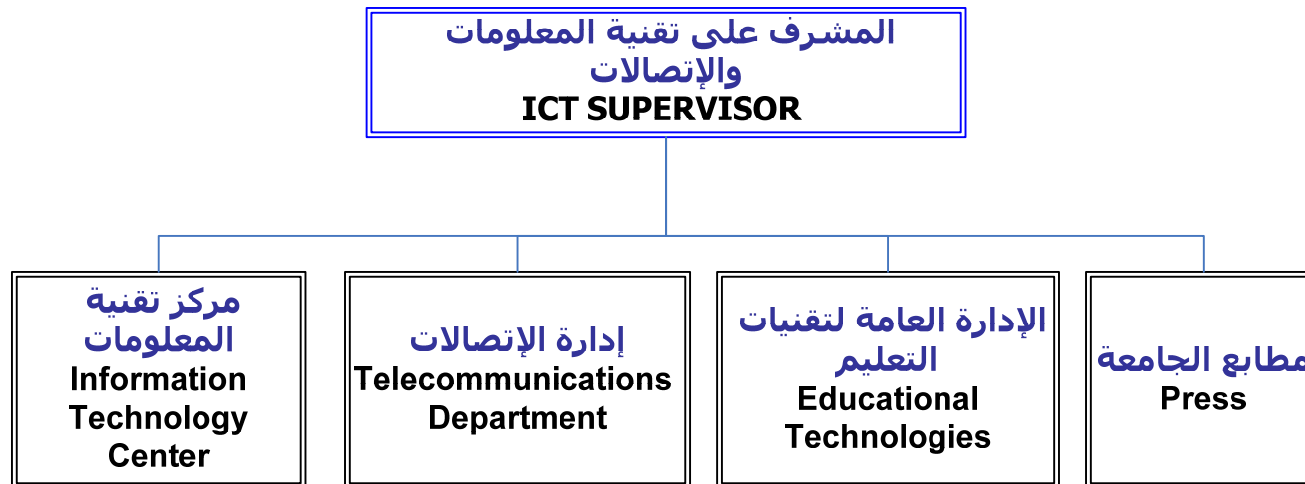
- The Supervisor, Information & Communications Technology (SICT) position was established at KFUPM on January 29, 2005.
- SICT acts as the Chief Information Officer (CIO) for KFUPM. He focuses on the development of information and communications technology at KFUPM. This development should be aligned with the University strategic IT plan along with the academic and administrative goals.
- The SICT reports to the Rector of KFUPM (CEO). Four departmental heads are reporting to SICT, namely, the Director of Information Technology Center (ITC), the Director General of Educational Technologies, the Administrator for Telecommunications and the Director of Press.



ICT Mission

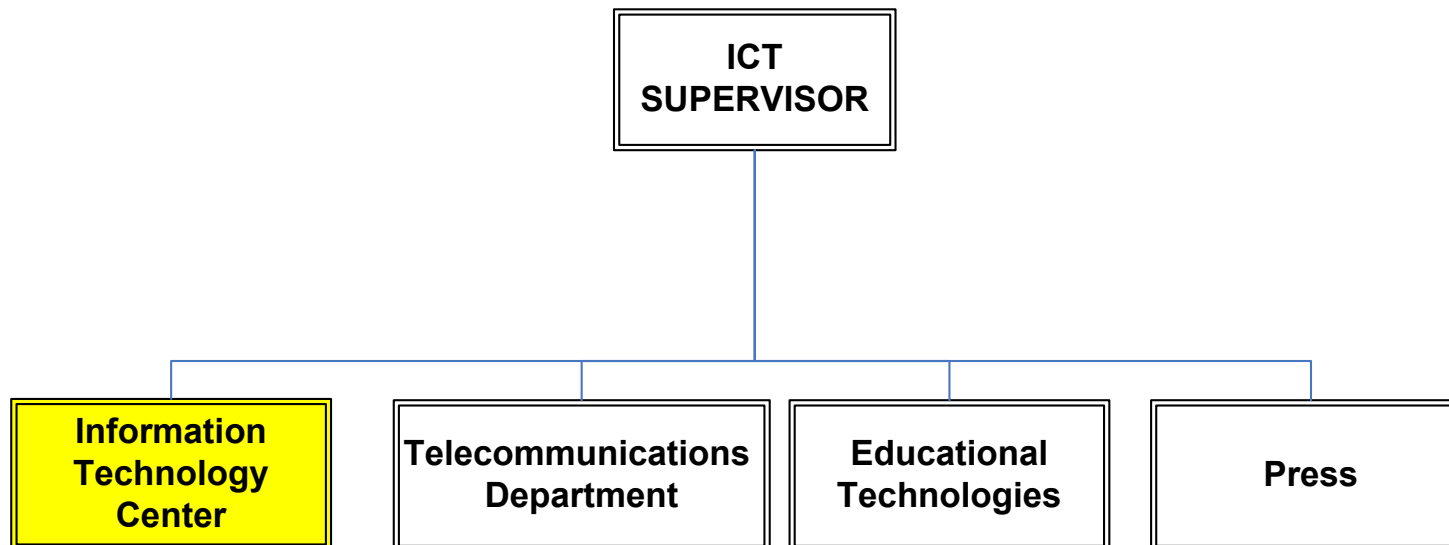
Information & Communications Technology (ICT) is committed to providing *high-quality information and communications services* that foster a productive academic and research environment for students, faculty, administration and staff at KFUPM.

ICT Organizational Charts





Information Technology Center





Overview of ITC Recently Completed Projects

- IT Director will present a complete details about ITC projects. This is just a quick overview.
- **Wireless Computing**
 - 38 academic buildings fully wireless zones. Increased utilization through deployment of 800 notebooks
- **Frame Agreement 2005/06 for Desktop Hardware**
 - ▶ New desktop computers acquired include *800 notebooks* and *1000 PCs*, printers, scanners *etc.*
- **New University Website**
- **Student Dorms Network**
 - ▶ Over *1100* student computers currently connected
 - ▶ Support for *2204* fast Ethernet nodes (100 Mbps)
- **Application Development & Deployment**
 - ▶ Redevelopment/enhancements to *Financial Resources System & Human Resources System*
 - ▶ Development of *Student Mail Desk System*, and *Student Payroll System*
 - ▶ Horizon Deployment in the Main Library
- ▶ **Community College Support**
 - Continuous server & desktop hardware acquisition support at Hail, Dammam & Hafr Al-Batin



ITC Ongoing Projects

- **Enterprise Database Implementation**
 - New design to integrate legacy databases
 - Preparation for data migration to ERP System (Project Raed)
- **Document Management System (DMS) Implementation**
 - Acquiring Advanced Workflow to support current DMS
 - Procurement of high-end DMS-enabled scanners for all departments
- **Server Consolidation**
 - Rack-based Enterprise & Blade Servers to replace more than 60 scattered old servers
 - Capacity enhancement to improve performance of critical systems
 - Staggered acquisition to maintain state-of-the-art hardware for future implementations including ERP
- **Online Help Desk, Change Management & IT Assets Management**
 - Enhanced accountability to improve services
 - Clear guidelines and aggressive changes to process hardware & software requests
 - Intensive effort to streamline IT Assets ownership
- **Network & Systems Management**
 - Advanced implementation for continuous monitoring and detection of network & systems failures



ITC Future Projects

- **KFUPM Portal**
 - Institutions of higher-education collaborative portal **uPortal** adopted for implementation
- **Extended Mobile Campus**
 - **WiMAX**-based extensions to create a digital university campus with better bandwidths for e-learning
 - Intel plans WiMAX enabled notebooks by third quarter 2006
- **Training / Awareness for Faculty/Administration**
 - Intensive programs planned
- **Curriculum Delivery Systems Enhancements**
 - Planned deployment of **Centra** to enhance **WebCT**
 - Enhanced course content management
- **ERP Implementation, Raed Project**
 - Intensive preparation for required IT Support
 - Enterprise database design and implementation
 - Building required IT competencies for successful deployment



KFUPM Wireless LAN (WLAN) Project – Buildings & Zones Covered

Coverage Statistics

- **Total 38 buildings are covered including**
 - **All academic buildings**
 - **Three (3) students' activity areas in student dorms**
- **Three (3) outdoor areas will soon be covered as well to provide ubiquitous coverage between important buildings**
- **Total of 314 Access Points (APs) are deployed**
- **All the above areas have good coverage and good signal strengths**

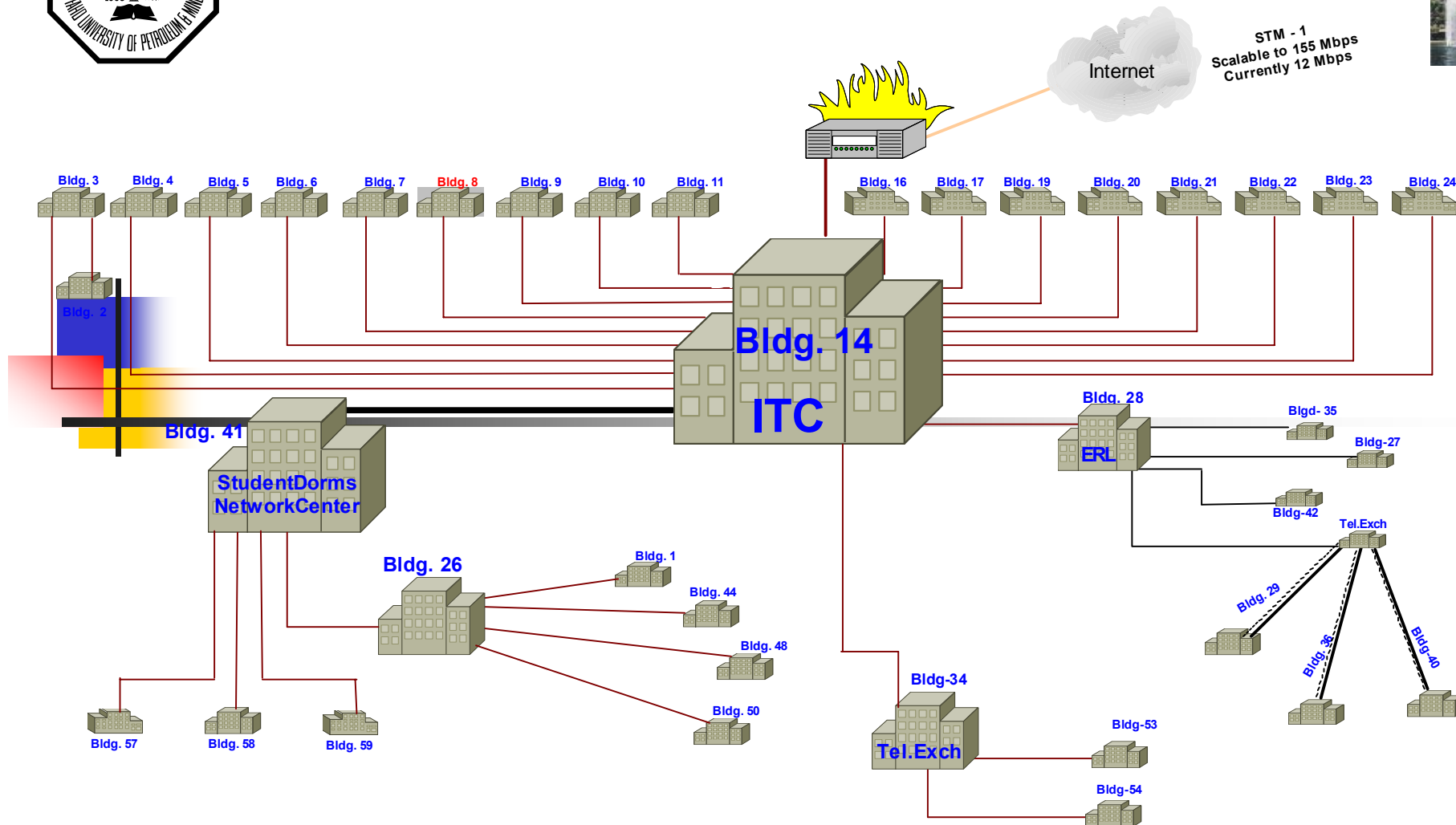


WLAN Technology - Brief Overview

- Specifications:
 - Complete Cisco wireless LAN deployment with Aironet 1200 AP series
 - IEEE-802.11g (Backward compatible with 802.11b)
 - Operating frequency is 2.4 Ghz
 - Secured communication via AEGIS client, used for secure authentication and communication



KFUPM Campus Network (Buildings to be covered in WLAN Project)



STM - 1
Scalable to 155 Mbps
Currently 12 Mbps

TITLE		REVISIONS		Legends :	
FILE NAME:	DESCRIPTION	NO.	DATE		DESCRIPTION
KFUPM-WLAN Buildings	KFUPM Campus Network (Buildings to be covered in WLAN Project)	01	30/03/05	KFUPMWLAN	4X1 Gbps (Fibre Optic)
					1 Gbps (Fibre Optic)
DATE :	SCALE				100 Mbps (Fast Ethernet)
30 Mar, 2005	NONE				12 Mbps (ATM)
LATEST REV:	JOB NO.	CHECKED	DRAWN		2 Mbps (HDSL)
30 Mar, 2005	J-01-01	Zainulabadin Khurram	Asadullah		ADSL
					1 Gbps (In Future)

برامج مساندة التعلم

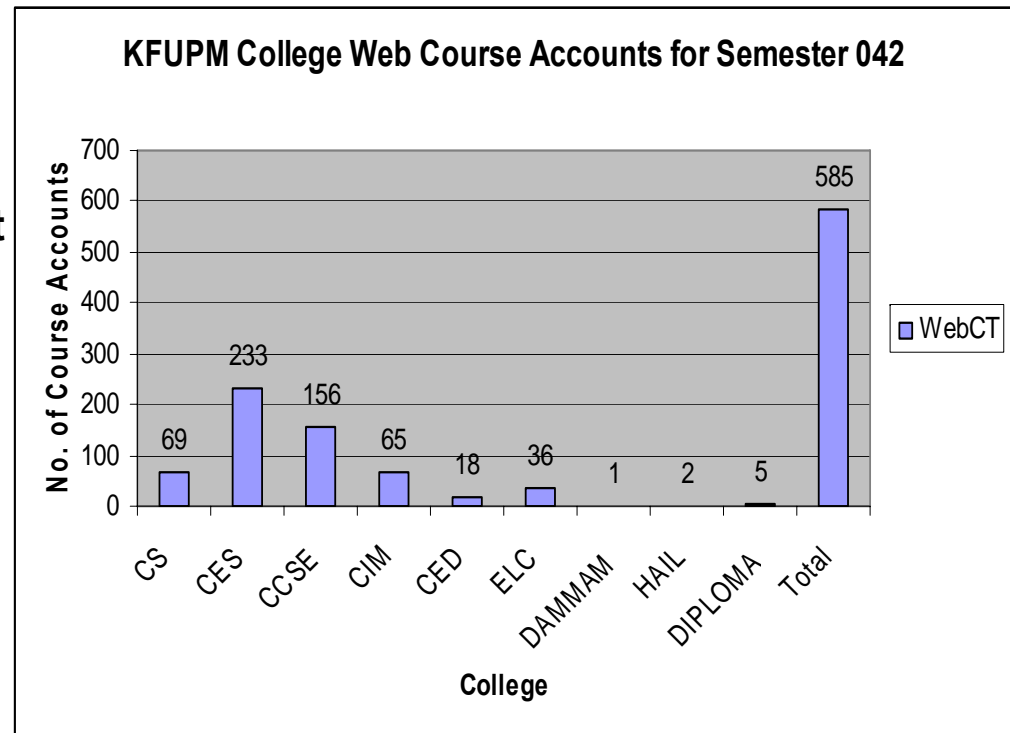
Instructional Technology



- WebCT Campus Edition (Ver. 4.0.3.10).
- Blackboard (Bb) Basic Edition (Ver. 6.1.0 Build 1).
- WebCT is Arabic Language Enabled.
- WebCT (**609 courses** in semester 051)
- WebCT course accounts: undergraduate, graduate, Hail Community College and diploma course accounts.
- Bb (**63 courses** – already phased out by end of 041)

WebCT Course Accounts (042)- Typical Statistics

- College of Sciences (CS)
- College of Engineering Sciences (CES)
- College of Computer Science and Engineering (CCSE)
- College of Industrial Management (CIM)
- College of Environmental Design (CED)
- English Language Center (ELC)
- Dammam Community College
- Dammam and Hail Community College
- University Diploma Programs



الفصول الذكية

Smart Classrooms

- Maintenance and support for *100+ smart classrooms* in the academic buildings.
- In the process of implementing *new additional smart classrooms* and upgrading some smart classrooms' equipment such as PCs, projectors, and podiums.

التدريب والتعلم الإلكتروني Training and e-Learning



ITC Training Courses: التدريب

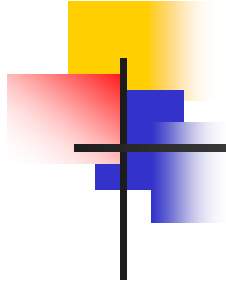
- Some of those courses are offered to KFUPM members:

Win 2000 & Office 2000 Beginners Level Courses and Intermediate Level Courses, Win XP & Office XP for Directors, Managers, Deans and Chairmen. MS EXCEL Workshop for ELC Teachers for Academic Purposes. Web Design Course has been repeated few times.

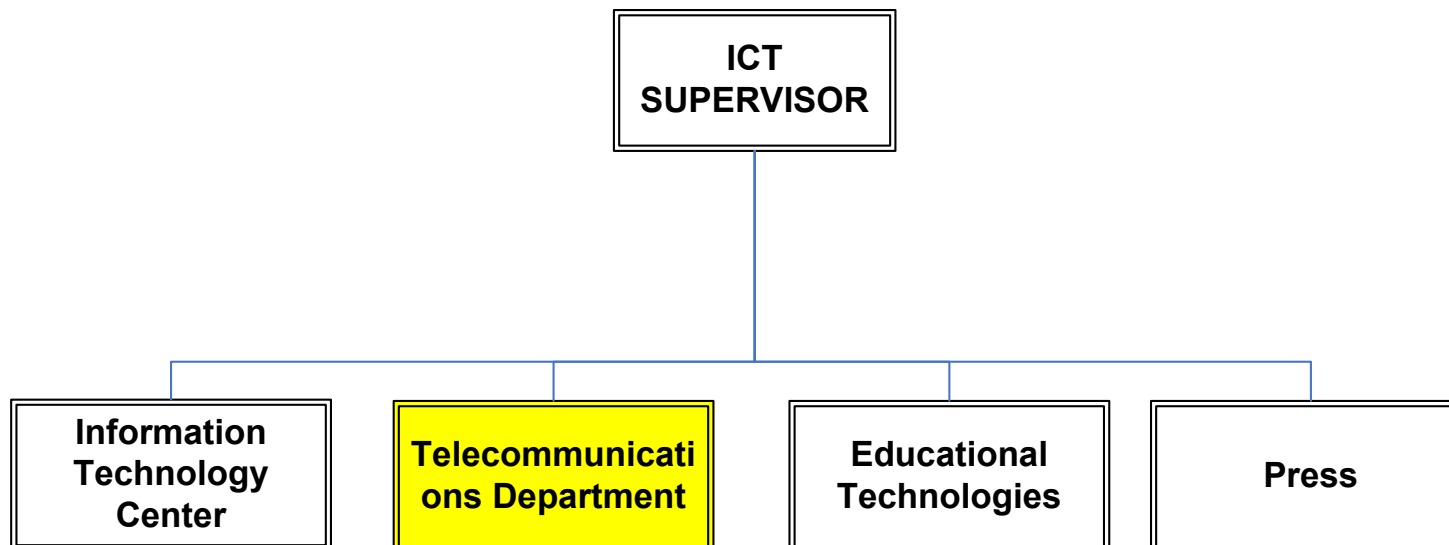
Interactive e-Learning Tool (NETg): التعلم الإلكتروني

- Currently, more than *1200 courses (IT & MGT courses)* are available. The number of courses will be increased continually.

▶ (Use your *internet account* username and password to access the tool)



Telecommunications Department



Telecommunications??

Telephone

Smart Card

ADSL

Welcome to
the Telecommunications Department.

Mobile Radio

IVR

Fire Alarm & Protection

Maintenance Request System



Services in Numbers

Telephone Extensions	9000
ADSL Subscribers	500
Radio Users	400
Access Control Points	350
Fire Protection Systems	40
IVR Systems	3
Processing of Maintenance Requests/day	250



Recently Completed Projects

- Enhancement of Telephone Network Infrastructure.
- Installing PABX for HFCC and DCC.
- Linking DCC to KFUPM by a Wireless Link (WiMax, 4 Mbps).
- Major Installations/Renovations of Fire Protection Systems.
- Pilot Project for Providing Access Control to Smart Classrooms.
- Developing IVR System for Housing and Office Services.
- Developing IVR system for Ministry of Islamic Affairs.
- Launching Telecommunications Department Website.



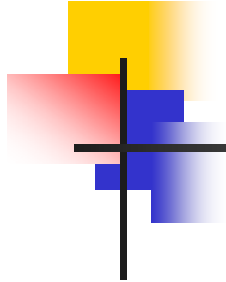
On-Going Projects

- Voice Services for the Newly Constructed Buildings.
- Protecting All Smart Classrooms by Smart Card Access Control.
- Upgrading Smart Card Management Software To a Web-based System.
- Developing IVR System For ITC Services.
- Automating All Internal Processes of Telecom Department.

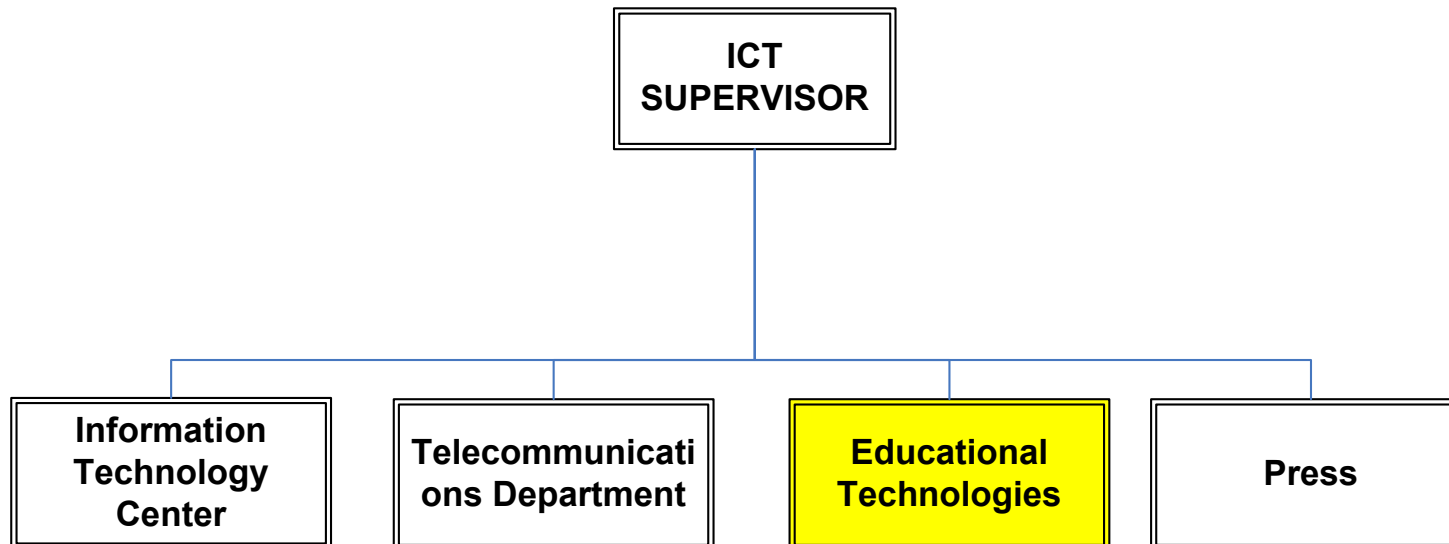


Future Projects

- Upgrading PBX System to a State-of-the-Art IP-based System
 - IP Telephony
 - Mobile Telephony
 - Unified Messaging.
- Creating Further Applications of Smart Card:
 - Access to Library System
 - Access to Medical Center Filing System
 - Secure Access to Public Computers.
- Introducing a Smart Tag RFID System (e-labeling) for
 - Asset Management
 - Library System.



Educational Technologies





Educational Technologies, Present Status

- Operating and maintaining of smart classroom.
- Auditoria Reservation.
- Audio Visual services.
- Video Conferencing services.
- KFUPM CATV operations.
- KFUPM Television channel operation.
- Loans of TV, Video, Digital cameras, Video and overhead projectors.
- Operating buildings 10 and 20.
- Maintaining sound systems in all KFUPM mosques.



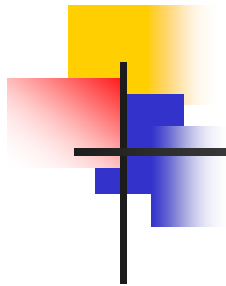
EduTech Current Projects

- Upgrading traditional classrooms into smart classrooms.
- Furnishing new building with smart classroom equipment
- Enhance the usage of Video conferencing.
- Installation of surveillance cameras inside academic buildings.
- Installation of Video projectors in conference rooms

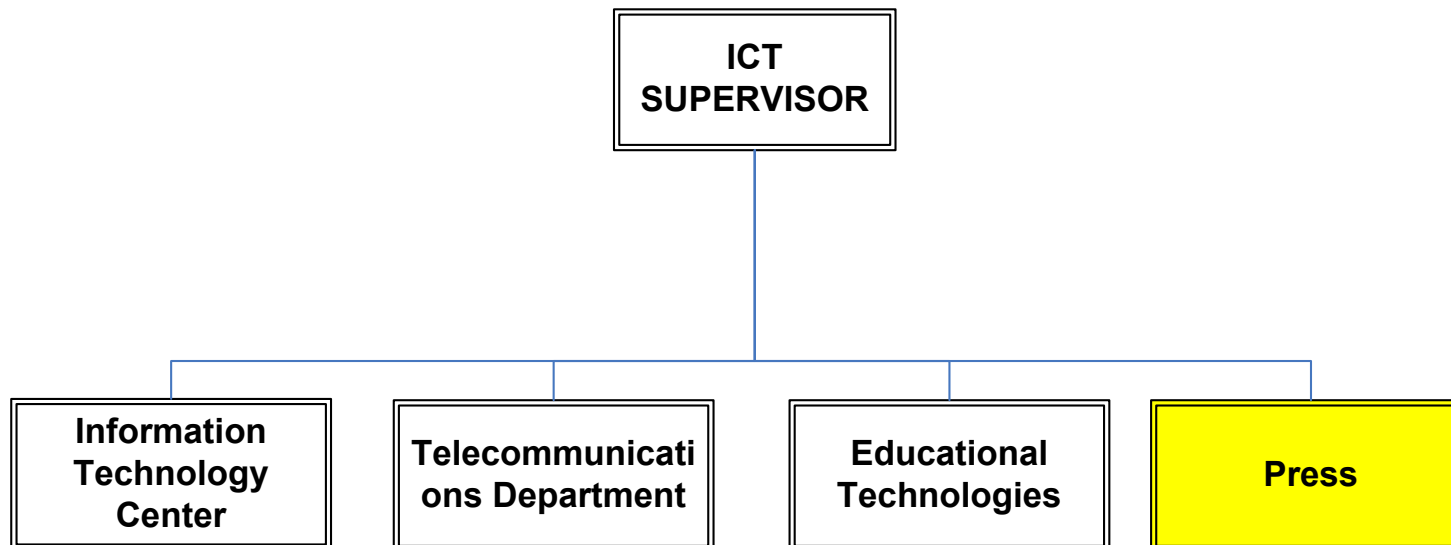


EduTech Future Projects

- Transforming all traditional classrooms into smart classrooms.
- Renovation of old smart classrooms.
- Renovation of audio visual equipment in auditoriums
- Enhancing the audio equisetec in the exhibit building



Press





KFUPM Press, Present Status brief

- Since 1975 KFUPM Press is serving the University.
- By the time the press promoted services, modern machines installed in the new building which give the ability of printing color jobs and books.
- Now most of the university needs for the printing materials are printed locally.
- The KFUPM Press comprises of six main sections: Graphics Art, Camera and montage, Offset Printing, Binding and finishing, engraving, and silkscreen printing.



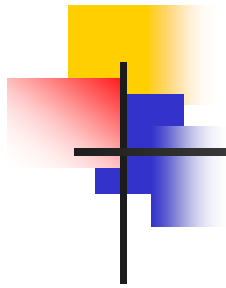
Press New Technologies

- **Automatic montage:** now the layout of pages are done faster and more efficiently using signa station software which save more than 80% of the time in this process.
- **CTF (Computer to Film):** It decreases the time and materials in the process for producing films in the camera and montage section.
- **Laser engraving:** now stamps are done better and sharper than before by using laser technology, also engraving and cutting jobs are done faster.
- **Digital Printing:** Urgent and small quantity jobs are done in a more efficient way and serve the University community in a better way.



Press Future Projects

- **New Automated perfect binding line:** (from collating to three knife trimmer) SR 3 million, this line will decrease the time by 75% and number of labors.
- **New 4 colors offset printing machines:** to speed-up the jobs and get better printing quality.
- **New Digital printing machines.**
- **On-Line Job Request system:** this will enable the community to request a new job and to follow up requested jobs. Requesting, Department head approval for the request, Director of the Press approval, notifications and specification of the jobs will be on line (no more papers).
- **Automated Press store.**



Thank you 😊