



# CAMEROON-CONGO INTER-STATE UNIVERSITY



*Center of Scientific and Technological Excellence at the Heart of Central Africa  
(Sangmelima Campus)*

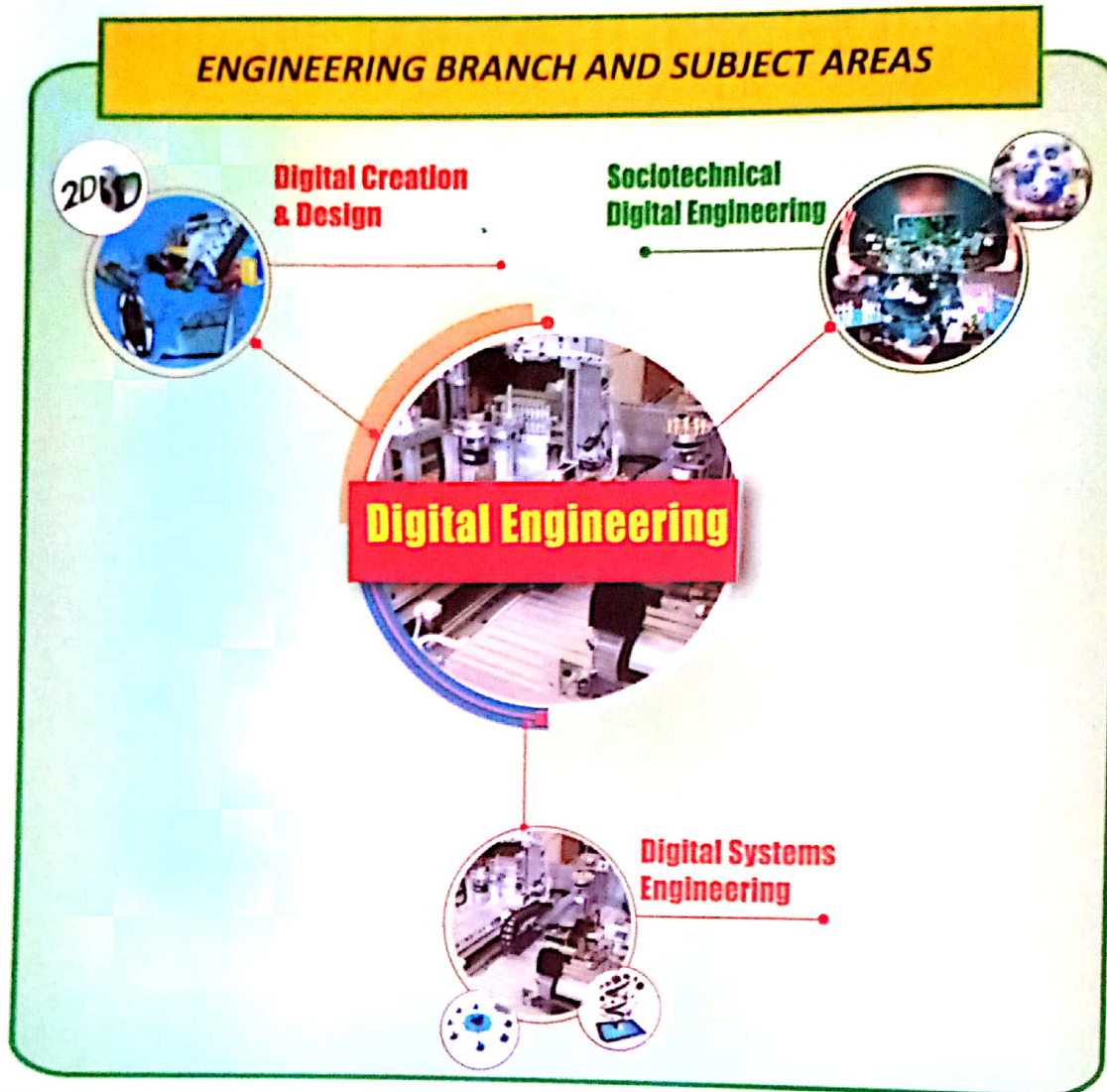


## *International Advanced School of Digital Engineering of Sangmelima*





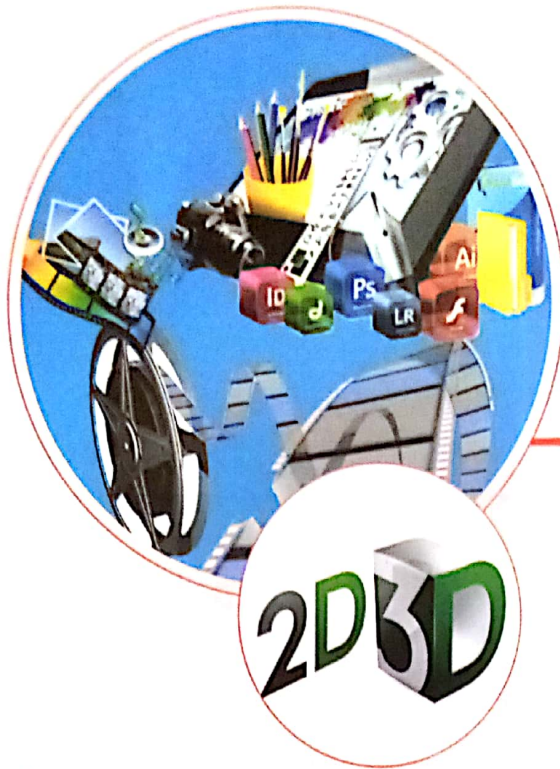
## ENGINEERING BRANCH AND SUBJECT AREAS



## Generic skills of graduates

- **Digital artistic creation** (web design, images and sounds, graphic and audio supports, special effects, virtual reality, interactive installations, audio and video mixing, video games, cartoons, etc.)
- **Creation and operation of digital systems** (software, communication networks, multimedia services, web and mobile services, connected objects, information systems, cyber security, etc.)
- **Communication on the web and social media** (e-marketing, e-business, influence and management of virtual communities, web documentary, etc.)
- **Artificial intelligence** (expert systems, automatic learning, computer-assisted vision, etc.)
- **Information intelligence** (information monitoring, data mining, knowledge management, documentary information, etc.)
- **Management of ICT-intensive sectors** (e-governance, cyber defense, standards and norms, ICT policy, competitive intelligence, markets regulation, strategic and project management, quality assurance of digital systems, legal and financial management, etc.)
- **Creation of start-ups** (project ideas, business models, teams' formation, financing,





# Digital Creation & Design

## 4 majors

### Digital and audiovisual production

- Games and interactive applications
- Digital fiction
- Interactive and scriptwriting
- Audio and video editing and post-production
- Sound engineering and design

### Infographics, Graphics and Multimedia

- Graphics and elaborate illustrations
- Plastic and graphic creation
- 2D-3D landscape and architecture
- 3D prototyping and modeling
- Complex photo editing
- Production and media preparation (texts, sounds, still or moving images, ...)
- Multimedia programming
- Computer-assisted production

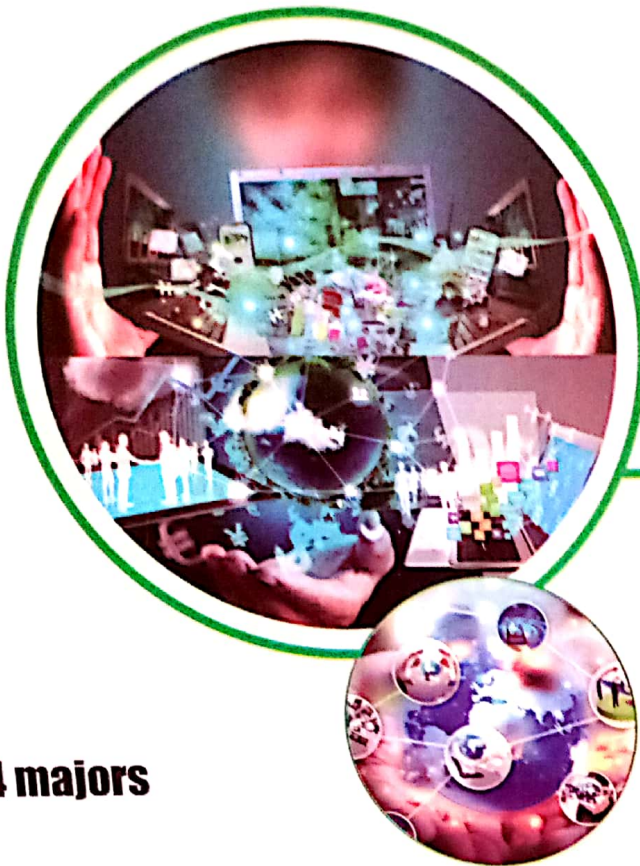
### Animation, 3D Realization and Visual effects

- Animated graphic design
- Animation for web or dynamic publishing
- Modeling, animation and 3D renderings
- Video production, editing and special effects
- Augmented reality

### Ergonomic, Interaction design and Web design

- User interface design (UI design)
- User experience design (UX design)
- Interactive systems engineering
- Configuration of content management systems (CMS)
- Dynamic websites development
- Web communication





# Sociotechnical Digital Engineering

4 majors

## Information Management

- Management of information systems
- Indexing and information retrieval
- Documentary engineering and content management
- Information visualization
- Data warehouse management
- Networks, security and information systems

## Media Engineering

- Management and development of media products / processes
- Evaluation and optimization of media products/processes
- Média products business models
- Web documentaries production
- Virtual community animation
- E-communication
- E-business

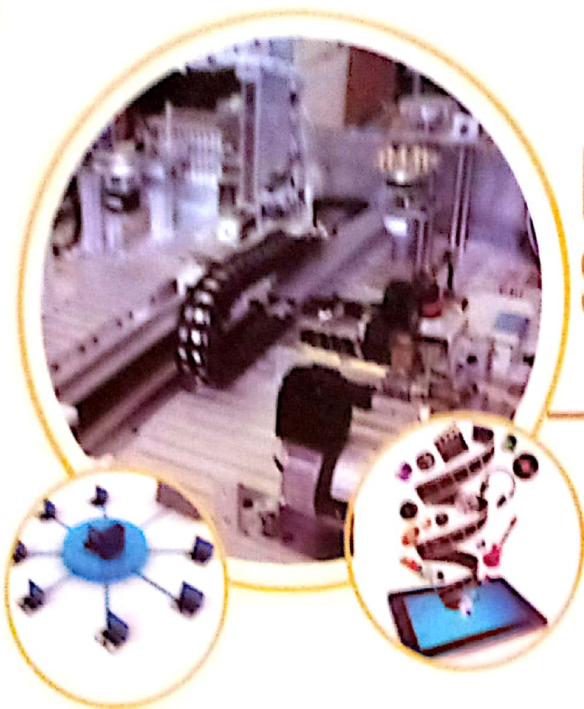
## Knowledge Management

- Data mining
- Automated learning
- Artificial intelligence
- Modeling, capitalization and knowledge management in the enterprise

## Digital-related Legal and Economic Expertise

- E-government and Internet governance
- Legal and economic issues related to ICT deployment
- ICT law
- ICT economy
- Intellectual property and information society
- Digital crime
- ICT projects management
- E-business





# Digital Systems Engineering

## 5 majors

### Mathematics and Computer Engineering

- Data Science
- Virtual reality
- Theoretical computer science
- Theoretical computer science
- Numerical analysis
- Probabilité et Statistiques
- Operational research
- Vision and learning
- Quantitative finance
- Optimization

### Software and Information Systems Engineering

- Software design, operation and quality
- Systems integration
- Urbanization of information systems
- Business process engineering
- Knowledge modeling
- Decision systems

### Mobile and Embedded Digital Systems

- Electronics and Computer systems
- Computer mechanics and electronics
- Mobility and Real-time computing
- Electronics systems
- Industrial data
- Connected objects
- Cloud computing

### Digital systems security and safety

- Computer and IT systems administration
- Security audit
- Cyber defense
- Cyber investigation
- Cryptology
- Electronic banking
- Information security

### Networks and communicating digital systems

- Electronics and communications
- Electronics systems
- Networks administration and deployment
- Telecom networks architecture and planning
- Radio engineering
- Transmission engineering





## Synopsis of the program

### SEMESTER 1 TO SEMESTER 4

#### COMMON CORE CURRICULUM

Basic subjects (whose weights depend on the subject area) in:

- Computer science and related disciplines;
- Engineering sciences;
- Humanities and Social sciences
- Art, Art science and Design
- Languages and Communication
- Entrepreneurship and Project Management

### EVALUATION – ORIENTATION - SPECIALIZATION

### SEMESTER 5 TO SEMESTER 9

#### SPECIALIZATION CURRICULUM

- 2 and a half years to perfect your professional profile;
- Personalized follow-up of the student;
- Practices and techniques of the profession;
- Concepts and formalisms;
- Professionalization and preparation for professional insertion

### SEMESTER 10

Engineer and expertise internship: 6 months



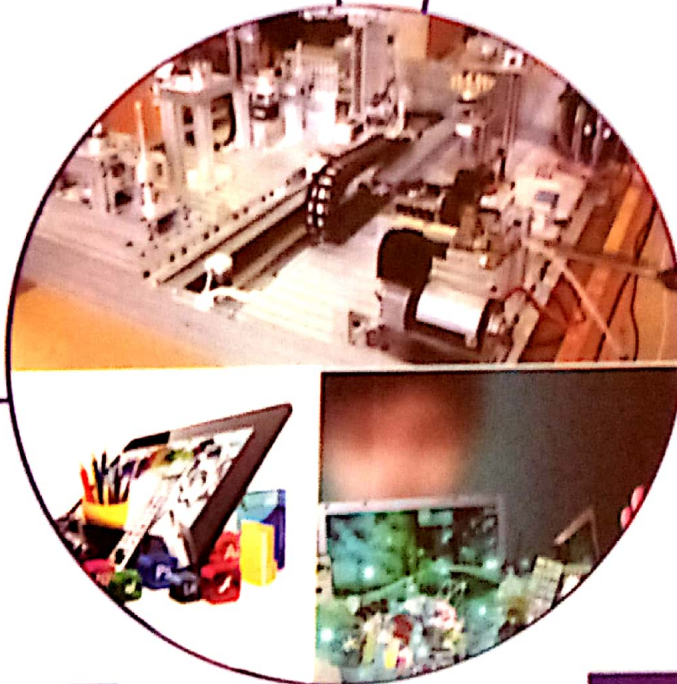
# Career opportunities

## Digital Systems Architect

Information Systems  
Networks and Telecom  
Software systems  
Connected objects  
Embedded systems

## Digital Resources Manager

Data bases  
Digital systems and networks  
Digital Security and Safety  
Norms and Standards  
Regulation and E-governance



## Cognitive Expert

Human-machine interactions  
Ergonomics  
Intelligent systems  
Change Management

## Digital Creation Project Manager

Animation and Multimedia graphics  
Digital editing  
Visual communication  
Audiovisual production  
Digital simulation  
Web design

## Information & Knowledge Manager

Digital strategy  
Documentary organization  
Documentary media  
Social media  
Web marketing  
Digital information monitoring  
Knowledge engineering

The school, that issues the **Engineer's Degree in Digital Engineering**, recruits secondary education graduates aged 24 years at most through a competitive entrance examination and a selective direct entrance scheme

## SUBJECT AREAS

**Digital Creation  
& Design**

**Sociotechnical Digital  
Engineering**

**Digital Systems  
Engineering**

Open to graduates of secondary education in:

- Art and Literature subjects
- Humanities and Social Science subjects
- Mathematics and Science subjects
- Technology subjects

Open to graduates of secondary education in:

- Mathematics and Science subjects
- Technology subjects

## DEGREES

End-of-course students who successfully complete a research-oriented thesis receive in addition to the **Engineer's Degree** (Diplôme d'Ingénieur), depending of the subject area, either a **Master of Science in Engineering** (Master en Science de l'Ingénieur) or a **Master of Arts in Engineering** (Master en Arts de l'Ingénieur).

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