

SOFTWARE ENGINEERING

www.alphatech.ac.ke

PROSPECTUS
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About the Programme

Build the Applications That Power the Digital World.

Software powers businesses, governments, healthcare, education, finance, and nearly every aspect of modern life. Skilled software developers are driving innovation by creating websites, mobile applications, cloud solutions, and enterprise systems that solve real-world problems.

The Software Development programme at AlphaTech Training Institute equips students with practical programming skills, modern software engineering practices, and hands-on experience in building real applications. Through project-based learning, industry-standard tools, and collaborative development, students graduate ready to build software solutions for today's digital economy.

Why Study Software Engineering?

- Learn one of the world's most in-demand technology skills.
- Build real websites, mobile apps, and software applications.
- Gain practical, hands-on coding experience.
- Develop a professional portfolio that showcases your work.
- Prepare for careers in software engineering and technology.
- Build the skills to freelance, innovate, or launch your own technology startup.
- Learn technologies used by companies around the world.

Who Should Enroll?

- This programme is ideal for:
- KCSE graduates passionate about design and creativity
- University students seeking practical design skills
- Career changers pursuing creative professions
- Working professionals looking to upskill
- Entrepreneurs interested in interior design and space planning

Qualification

1. Diploma in Software Engineering

- **Duration:** 3 Academic Years (6 Semesters) + Internship
- **Award:** ICM Diploma in Software Engineering
- **Mode of study :** Full-time, Part-time, Weekend
- **Entry Requirements :** KCSE Mean Grade C- and above (or equivalent)

2. Certificate in Software Engineering

- **Duration:** 1 Academic Year (3 Semesters)
- **Award:** ICM Certificate in Software Engineering
- **Mode of study :** Full-time, Part-time, Weekend
- **Entry Requirements :** KCSE Mean Grade D, D+ (or equivalent)





Career Opportunities

Graduates can work as:

- Software Developer
- Web Developer
- Front-End Developer
- Back-End Developer
- Full-Stack Developer
- Mobile Application Developer
- Systems Developer
- API Developer
- Quality Assurance (QA) Tester
- DevOps Associate
- Freelance Software Developer
- Software Engineer

Graduates may find employment in:

- Technology companies
- Software development firms
- Financial institutions
- Government agencies
- Telecommunications companies
- Healthcare organizations
- E-commerce businesses
- Startups
- Educational institutions
- Consulting firms

Why AlphaTech?

Students choose AlphaTech because we offer:

- **Technology-Driven Learning:** Learn using modern digital design tools and industry-relevant technologies.
- **Practical Studio Experience:** Develop your skills through hands-on projects and real-world design challenges.
- **Industry-Relevant Curriculum:** Study a programme aligned with international professional standards.
- **Experienced Trainers:** Learn from qualified professionals with academic and industry expertise.
- **Portfolio Development:** Graduate with a professional portfolio that showcases your creativity and technical ability.
- **Career-Focused Education:** Develop the practical competencies employers and clients expect from today's interior designers.



What You'll Learn

1. Programming Fundamentals

Build a strong foundation in programming and computational thinking while learning how to design efficient software solutions.

You'll develop skills in:

- Programming logic
- Problem solving
- Algorithms
- Object-oriented programming
- Version control
- Software development principles

2. Web Development

Learn to create responsive, secure, and interactive websites using modern web technologies.

You'll develop skills in:

- HTML5
- CSS3
- JavaScript
- Responsive web design
- Front-end frameworks
- User experience principles

3. Mobile Development

Design and build modern mobile applications for Android and cross-platform environments.

You'll develop skills in:

- Mobile application development
- User interface design
- Mobile databases
- App deployment
- Mobile APIs
- Application testing

4. Databases

Learn how to design, build, manage, and secure databases that power modern software applications.

You'll develop skills in:

- SQL
- Database design
- Data modelling
- Database management
- Data security
- Database optimisation



5. Cloud Computing & APIs

Discover how modern applications communicate, integrate, and scale using cloud technologies.

You'll develop skills in:

- REST APIs
- API integration
- Cloud computing fundamentals
- Web services
- Authentication
- Cloud deployment basics

6. Software Engineering Projects

Apply your knowledge by designing and developing complete software solutions that solve real business problems.

You'll develop skills in:

- Software project planning
- Agile development
- Team collaboration
- Software testing
- Deployment
- Portfolio development

Learning Experience

Students learn through:

- Live coding sessions
- Practical programming laboratories
- Real-world software development projects
- Industry case studies
- Group software development projects
- Code reviews and peer collaboration
- Portfolio development
- Capstone software project
- Industrial attachment opportunities
- Career coaching and mentorship



Contact Us



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