

### **Computer Science**

Graduates of Computer Science are in high demand in Nigeria's growing tech-driven economy. Common job roles include **Software Developer/Engineer**, **Data Scientist/Analyst**, **Cybersecurity Analyst**, **Database Administrator**, and **IT Project Manager**. Key industries for these roles are FinTech and Banking, Telecommunications, E-commerce/Retail, Government/Parastatals, and ICT companies 1 2.

- **Software Developer/Engineer** (Tech firms, FinTech, Telecoms, eCommerce) *Top Skills*: Programming (e.g. JavaScript, Python, Java) (3), software design, version control (Git), agile methodologies, problem-solving, debugging, communication, system architecture, RESTful APIs, cloud platforms (AWS/Azure).
- **Data Scientist/Analyst** (Banking, Tech, Government, Consulting) *Top Skills*: Data analysis & visualization (SQL, Excel, Power BI), Python/R programming, statistics/machine learning (regression, clustering) (4) (5), big data tools, critical thinking, communication, data cleaning, database querying, dashboarding.
- **Cybersecurity Analyst** (Banks/FinTech, Telecoms, Government, Security Firms) *Top Skills*: Network/ security fundamentals (firewalls, IDS/IPS), penetration testing, vulnerability assessment, incident response, security tools (SIEM, anti-malware), cryptography basics, risk analysis, programming/scripting (Python), compliance knowledge (ISO27001/NIST) <sup>6</sup>, attention to detail, problem-solving.
- **Database Administrator** (Finance, Telecom, Insurance, Tech) *Top Skills*: Database design and optimization (MySQL, Oracle, SQL Server), SQL query tuning, backup/recovery, data modeling, knowledge of transactions/concurrency, Linux/Windows administration, shell scripting, cloud databases (AWS RDS/Azure SQL), troubleshooting, security (encryption, access control).
- **IT Project Manager** (Technology firms, Consulting, Oil&Gas, Manufacturing) *Top Skills*: Project planning (PMBOK/PRINCE2/Agile Scrum), stakeholder management, risk management, budgeting, scheduling (MS Project/JIRA), leadership, communication, problem-solving, documentation (MS Office), quality assurance, team coordination.

# **Software Engineering**

Software Engineering graduates often fill roles very similar to Computer Science, focusing on large-scale systems and process. Five key roles are **Software Engineer**, **Systems Analyst**, **DevOps Engineer**, **Quality Assurance Engineer**, and **Technical Architect**. Industries include Software/Tech companies, FinTech and Banks, Telecommunications, Manufacturing (embedded software), and E-commerce 1.

- **Software Engineer/Developer** (FinTech, Tech, Telecom, E-commerce) *Skills*: Object-oriented programming (Java, C#, Python) <sup>3</sup>, software architecture, version control, CI/CD pipelines, REST APIs, cloud services (AWS/GCP/Azure), testing (unit/integration), data structures/algorithms, agile development, problem-solving.
- **Systems Analyst** (IT Consultancies, Banks, Insurance) *Skills*: Systems design, requirements gathering, UML/flowcharting, business process modeling, SQL/database knowledge, integration/APIs, user interface design, communication, technical documentation, testing coordination.
- **DevOps Engineer** (Technology firms, Telecoms, Oil&Gas IT) *Skills*: Linux administration, CI/CD tools (Jenkins/GitLab), containerization (Docker, Kubernetes), cloud platforms, scripting (Bash/Python), configuration management (Ansible/Chef), monitoring (Prometheus/Grafana), security basics, networking, teamwork.
- Quality Assurance (QA) Engineer (Software companies, FinTech, Telecom) Skills: Software testing

methodologies (unit, integration, regression), test automation tools (Selenium, JUnit), scripting (Python/ JavaScript), bug tracking (JIRA), attention to detail, critical thinking, communication, Agile/Scrum, documentation, continuous improvement.

- **Technical Architect** (Large IT/Finance firms, Consultancies) – *Skills*: System design and architecture, multiple programming languages, database systems, scalability strategies, security design, cloud architecture (AWS/Azure/GCP), microservices and API design, performance tuning, leadership, communication, strategic planning.

## **Information Technology (IT)**

Information Technology degrees prepare students for broad IT roles. Five common roles are **IT Support Specialist**, **Network Administrator**, **Systems Administrator**, **IT Consultant**, and **Business Analyst**. Key industries include Banks/Finance, Government/Utilities, Education, Telecoms, and Corporate Businesses 6

- **IT Support/Help Desk Specialist** (All industries) *Skills*: Troubleshooting (hardware/software), OS installation (Windows/Linux), networking basics (TCP/IP), ticketing systems, customer service, communication, active directory/admin tools, software deployment, problem-solving, time management.
- **Network Administrator/Engineer** (Telecom, Banks, Government) *Skills*: Network design and management (Cisco, Juniper), routing/switching (OSPF, VLANs), wireless, firewall configuration, network security, VPNs, monitoring tools, Linux/Windows Server, troubleshooting, documentation.
- **Systems Administrator** (Corporate IT, Datacenters, Education) *Skills*: Windows/Linux server administration, virtualization (VMware), cloud services (AWS EC2/Azure VMs), Active Directory, storage and backup management, monitoring (Nagios), scripting (PowerShell/Bash), security patches/upgrades, troubleshooting, system hardening.
- **IT Consultant/Business Solutions Analyst** (Consulting firms, Enterprises) *Skills*: IT strategy, business analysis, requirements gathering, system integration knowledge, cybersecurity awareness, communication, project management, stakeholder management, presentation skills, report writing, knowledge of ERP/CRM systems.
- **Business Analyst (IT)** (Finance, Insurance, Retail) *Skills*: Process mapping, requirements analysis, SQL for data queries, knowledge of business process, documentation (UML, user stories), communication, data analytics, problem-solving, familiarity with finance/ERP applications, stakeholder liaison.

#### Law

Law graduates typically become **Lawyers/Legal Officers**, **Tax Consultants**, **Compliance Officers**, **Legal Advisers**, and **Corporate Counsel**. They work in Law Firms, Corporate Legal Departments (Banks, Oil & Gas, Tech), Government Agencies, Insurance Companies (loss adjusting), and Publishing/Media for legal content

- Lawyer/Legal Officer (Corporate Lawyer) (Law firms, Banks, Oil/Gas, Tech) *Skills*: Legal research, drafting (contracts, briefs), negotiation, court advocacy, understanding of corporate/contract/tax law, communication, analytic reasoning, attention to detail, conflict resolution, ethics.
- **Tax Consultant/Advisor** (Accounting firms, Banks, Govt tax authorities) *Skills*: Tax law and regulations, accounting fundamentals, financial analysis, problem-solving, persuasive communication <sup>10</sup>, detail orientation, strategic tax planning, Microsoft Excel, continuous learning of tax updates.
- Compliance Officer (Banks, Corporate, Insurance, Telecom) Skills: Regulatory knowledge (CBN/SEC

guidelines), risk assessment, policy development, reporting, strong knowledge of ordinances 11, attention to detail, integrity, communication, analytical thinking, document review.

- **Legal Publisher/Content Writer** (Media companies, Legal publishers) *Skills*: Legal writing and editing, research, clarity in communication, comprehension of case law, efficiency, ability to explain legal concepts to lay audience 12, creativity, attention to detail, referencing, computer literacy.
- **Loss Adjuster (Insurance)** *Skills*: Insurance law, analytical and investigative ability, negotiation skills 13, excellent communication, financial literacy (to assess claims), attention to detail, empathy, problem-solving, compliance knowledge.

#### **Economics**

Economics graduates find roles as **Financial Managers**, **Financial Analysts**, **Economists**, **Actuaries**, and **Management Consultants**. These jobs span Finance & Banking, Investment Firms, Government/Regulatory Agencies, Consulting Firms, Insurance (actuarial), and NGOs 14 15.

- **Financial Manager** (Banks, Corporations, Government) *Skills*: Financial planning & budgeting, financial reporting, strategic planning, risk management, investment analysis, leadership, communication, use of finance software, knowledge of finance/accounting regulations <sup>15</sup>.
- **Financial Analyst** (Investment firms, Banks, Corporates) *Skills*: Financial modeling and forecasting, data analysis, Excel (VBA/PowerPivot), understanding of financial markets, statistical analysis, critical thinking, communication, trend analysis, report writing, knowledge of CFA concepts <sup>16</sup>.
- **Economist/Policy Analyst** (Government, Central Bank, Think-tanks) *Skills*: Econometric analysis, macro/microeconomic theory, data/statistical analysis, use of software (Stata/R), report writing, policy evaluation, critical thinking, research methods, forecasting, communication.
- **Actuary** (Insurance companies, Pension funds, Banks) *Skills*: Probability and statistics, financial mathematics, actuarial modeling, programming (Python/R) <sup>17</sup>, problem-solving, communication, risk assessment, knowledge of actuarial software (Excel macros, SQL), attention to detail.
- **Management Consultant** (Consulting firms, Corporates) *Skills*: Business process analysis, SWOT and financial analysis (as noted in consultancy roles) <sup>18</sup>, problem-solving, strategic thinking, communication, stakeholder management, presentation, teamwork, project management, Excel modeling, industry research.

### **Business Administration**

Business Administration (BBA) graduates often become **Operations Managers**, **Human Resources (HR) Managers**, **Sales/Business Development Managers**, **Project Managers**, and **Management Consultants**. Industries span virtually all sectors – especially Finance, Manufacturing, Telecoms, Energy, Retail, and Services. Key industries include Banking, Telecom, FMCG, Energy, and Government <sup>18</sup>.

- **Operations Manager** (Manufacturing, Retail, Telecoms) *Skills*: Operations planning, supply chain management, process improvement (Lean/Six Sigma), budgeting, leadership, communication, problem-solving, inventory control, ERP systems (SAP/Oracle), data analysis.
- **HR Manager/Officer** (All industries) *Skills*: Recruitment & selection, labor laws (Nigerian employment law), HR policy development, payroll and benefits administration, performance management, training & development, conflict resolution, communication, HRIS systems.
- **Sales/Business Development Manager** (FMCG, Tech, Pharma) *Skills*: Sales forecasting, client relationship management (CRM software), negotiation, market analysis, communication, strategic planning,

product knowledge, network building, presentation skills, target-driven mindset.

- **Project Manager** (Construction, IT, Oil&Gas) *Skills*: Project planning (PM tools like MS Project), risk management, budgeting, scheduling, Agile/Scrum methods, stakeholder communication, leadership, quality control, procurement management, documentation.
- **Management Consultant** (Consulting firms, Multinationals) *Skills*: Business analysis, process optimization (SWOT, financial analysis) 18, problem-solving, excellent communication, presentation, industry research, change management, client relations, strategic planning, teamwork.

### **Accounting**

Accounting graduates commonly work as **Accountants/Controllers**, **Auditors (Internal or External)**, **Financial Analysts**, **Forensic Accountants**, and **Chief Financial Officers (CFOs)**. They are employed in Banking & Finance, Government Agencies, Accounting/Audit Firms, Consulting, and Growing Tech companies (7) 19.

- **Accountant/Controller** (Banks, Corporates, Government) *Skills*: Financial reporting (IFRS/GAAP), bookkeeping, use of accounting software (QuickBooks, SAP FI), Excel, attention to detail, tax compliance, regulatory reporting, analytical skills, ethics, time management <sup>20</sup>.
- **Auditor (Internal/External)** (Audit firms, Corporations) *Skills*: Audit planning, risk assessment, documentation (working papers), knowledge of audit standards, GAAP, fraud detection, analytical skills, communication, integrity, Excel, statistical sampling.
- **Financial Analyst (Accounting Focus)** (Corporate, Banks, Government) *Skills*: Financial modeling, data analysis, variance analysis, budgeting, forecasting, Excel (pivot tables, VBA), accounting knowledge, attention to detail, communication, strategic thinking 21.
- **Forensic Accountant** (Finance/Insurance, Law Enforcement) *Skills*: Investigative techniques, forensic analysis, knowledge of finance law, fraud detection, data mining (Excel/ACL), attention to detail, report writing, ethics, critical thinking, audit skills 22.
- **Chief Financial Officer (CFO)/Finance Manager** (Large Corporations, Multinationals) *Skills*: Strategic financial management, corporate finance, leadership, cash flow management, investment analysis, budgeting, regulatory compliance, risk management, communication, high-level decision-making <sup>23</sup>.

#### **Finance**

Finance graduates often pursue roles similar to those of Economics and Accounting majors. Common positions include **Investment Banker**, **Financial Analyst/Planner**, **Risk Manager**, **Credit Analyst**, and **Portfolio Manager**. Industries include Banking/Finance, Investment Firms, Insurance, and large Corporations (24) (25).

- **Investment Banker** (Banks, Investment companies) *Skills*: Financial modeling, valuation, M&A analysis, Excel (advanced), PowerPoint, negotiation, regulatory knowledge, risk assessment, communication, research. <sup>26</sup>
- **Financial Analyst/Planner** (Banks, Corporations, Wealth management) *Skills*: Financial forecasting, budgeting, Excel, financial statement analysis, market research, communication, certification knowledge (CFA topics), attention to detail, reporting, problem-solving.
- **Risk Manager** (Banks, Insurance, Energy) *Skills*: Risk assessment methodologies, quantitative analysis, familiarity with Basel/IFRS standards, statistical modeling, Excel, risk reporting, regulatory compliance, communication, stress testing, data analysis.

- **Credit Analyst** (Banks, Microfinance, Leasing companies) *Skills*: Credit risk analysis, financial statement evaluation, ratio analysis, Excel, judgment/decision-making, communication, market/industry research, loan structuring, attention to detail, compliance knowledge.
- **Portfolio/Investment Manager** (Asset management, Pension funds) *Skills*: Investment strategy, equity/ fixed income analysis, portfolio diversification, performance analysis, Excel/VBA, Bloomberg/Reuters, communication, compliance, risk management, client relations.

## Marketing

Marketing graduates can work as Marketing Managers, Digital Marketing Specialists, Advertising/Brand Managers, Market Research Analysts, and Public Relations (PR) Officers. Key industries include Consumer Goods (FMCG), Retail, Media & Advertising, Tech (online businesses), and Financial Services 27

- **Marketing Manager** (FMCG, Retail, Tech, Finance) *Skills*: Strategy development, campaign planning, brand management, market analysis, communication, leadership, budgeting, digital marketing channels, CRM, teamwork <sup>27</sup> <sup>29</sup>.
- **Digital Marketing Specialist** (E-commerce, Tech, Media) *Skills*: SEO/SEM, social media marketing, content creation, Google Analytics/Web Analytics, email marketing, PPC advertising, HTML/CMS basics, data analytics, creativity, adaptability 30 31.
- **Advertising/Brand Manager** (Ad agencies, FMCG, Tech) *Skills*: Creative strategy, consumer insight analysis, media planning, content creation (storytelling) <sup>32</sup>, communication, project management, Adobe Creative Suite basics, negotiation, branding, market trend analysis.
- **Market Research Analyst** (Consulting firms, Corporates, Media) *Skills*: Survey design, data collection and analysis, statistics (SPSS/STATA), report writing, data visualization, critical thinking, SQL or Excel, communication (presenting insights), attention to detail, trend analysis <sup>28</sup>.
- **Public Relations (PR) Officer** (Corporate Communications, Media Houses, NGOs) *Skills*: Media relations, press release writing, event planning, social media management, communication, brand messaging, networking, crisis communication, creativity, content creation.

#### **Mass Communication**

Mass Communication grads often work as **Journalists/Reporters**, **Editors**, **Public Relations Officers**, **Content Creators**, and **Media Planners**. Industries include Newspapers/TV/Radio, PR & Advertising Agencies, Digital Media, Corporate Communications (Banks, Oil & Gas), and Entertainment.

- **Journalist/Reporter** (Media houses: TV, Radio, Newspapers) *Skills*: Investigative reporting, writing/ editing, interviewing, researching, fact-checking, communication, ethics, multimedia skills (video/photo editing), social media, time management.
- **Editor (Copy/Content Editor)** (Publishing, Newspapers, Digital media) *Skills*: Strong writing/editing (style guides), language proficiency, attention to detail, grammar expertise, fact-checking, CMS management, communication, teamwork, deadline management, SEO basics.
- **Public Relations (PR) Officer** (Corporate, NGOs, Government) *Skills*: Media relations, press release writing, event coordination, strong communication (written/verbal), branding, networking, strategic thinking, social media management, crisis management, creativity.
- **Content Creator/Producer** (Digital media, Marketing agencies) *Skills*: Content writing/video production, storytelling, SEO/content optimization, graphic design (canva/basic), social media platforms, creativity,

audience analysis, time management, basic editing (Adobe Premiere), collaboration.

- **Media Planner/Buyer** (Advertising agencies, Marketing) – *Skills*: Market research, audience analytics, media strategy, budgeting, negotiation, understanding of media channels (TV, digital, OOH), Excel for budgeting, communication, trend awareness, data analysis.

#### **Political Science**

Political Science graduates can work as **Policy Analysts**, **Political Risk Analysts**, **Diplomatic Officers** (Foreign Service), Campaign Managers, and Research Associates. Industries include Government/Public Service, Political Parties/NGOs, Media/Think-Tanks, International Organizations, and Public Relations 33

- **Policy Analyst/Public Affairs Specialist** (Government ministries, Think-tanks, NGOs) *Skills*: Policy research, data analysis (statistics), report writing, critical thinking, communication, stakeholder engagement, understanding of law/political processes, attention to detail, briefing skills.
- **Diplomatic Officer/Foreign Service** (Ministry of Foreign Affairs, Embassies) *Skills*: International relations knowledge, foreign languages, communication, negotiation, cultural sensitivity, report writing, leadership, strategic analysis, protocol, networking.
- **Political Risk Analyst** (Multinationals, Banks, Consultancies) *Skills*: Geopolitical analysis, risk assessment, data analysis, research (open source intelligence), writing reports, communication, critical thinking, familiarity with regional politics, forecasting, ethical judgment.
- **Campaign Manager/Coordinator** (Political parties, NGOs) *Skills*: Strategic planning, voter research (surveys), communication, event management, social media, budgeting, team leadership, negotiation, problem-solving, persuasion.
- **Research Associate (Social Science)** (Universities, NGOs, Research institutes) *Skills*: Qualitative/ quantitative research, survey design, data analysis (SPSS/R), literature review, report writing, communication, critical thinking, grant writing, project management, ethics.

#### **International Relations**

International Relations (IR) graduates often become **Diplomats/Foreign Service Officers**, **Trade and Development Analysts**, **NGO Program Coordinators**, **International Business Consultants**, and **Intelligence Analysts**. They work in Foreign Affairs, International Organizations (UN, ECOWAS), NGOs/Think-Tanks, Multinational Corporations, and Security Agencies.

- **Diplomat/Foreign Service Officer** *Skills*: Diplomatic negotiation, foreign languages, cultural diplomacy, international law/policies, communication, protocol, research, writing policy briefs, public speaking, adaptability.
- **International Trade/Development Analyst** *Skills*: Trade policy analysis, economics basics, cross-cultural communication, statistical analysis, report writing, project management, negotiation, understanding of international regulations (WTO, tariffs), stakeholder engagement.
- **NGO Program Coordinator (International Development)** *Skills*: Project planning/management (PM tools), grant writing, monitoring & evaluation, cross-cultural communication, budgeting, stakeholder liaison, report writing, research, problem-solving, leadership.
- **International Business Consultant** *Skills*: Global market research, business strategy, cross-border regulations, financial analysis, communication, cultural awareness, language skills, presentation, negotiation, project management.

- **Intelligence/Foreign Analyst** – *Skills*: Geopolitical analysis, intelligence gathering, language skills, security studies, critical thinking, briefing writing, data analysis, understanding of international law, discretion, analytical software (GIS, data mining).

### **Medicine (MBBS)**

Medical graduates primarily become **Doctors/Physicians** in various specialities (General Practice, Surgery, Pediatrics, etc.), **Medical Researchers**, **Public Health Officers**, **Clinical Educators**, and **Healthcare Administrators**. Key industries are Hospitals/Clinics, Public Health Agencies (Ministry of Health, WHO), Research Institutes, NGOs, and Pharmaceutical companies.

- **Medical Doctor (General Practitioner/Specialist)** *Skills*: Clinical diagnosis and patient care, medical knowledge, surgery (if specialist), communication, empathy, teamwork, decision-making, medical ethics, problem-solving, continuous learning.
- **Medical Researcher/Scientist** *Skills*: Research methodology, data analysis (biostatistics), laboratory techniques, scientific writing, grant writing, ethics approval processes, critical thinking, subject-matter expertise (e.g. virology, pharmacology), patience, collaboration.
- **Public Health Officer** *Skills*: Epidemiology, biostatistics, program planning, community health education, policy development, surveillance, data analysis, communication, project management, leadership.
- **Clinical Educator (Medical Lecturer)** *Skills*: Medical knowledge, teaching and presentation skills, curriculum development, research, communication, mentorship, writing (lectures, papers), staying updated (CME), organization.
- **Healthcare Administrator/Manager** *Skills*: Hospital administration, healthcare policy, budgeting, leadership, communication, human resources in health, quality assurance, regulatory compliance, problem-solving, data management (health information systems).

## Nursing

Nursing graduates typically become **Registered Nurses (RN)**, **Midwives**, **Clinical Nurse Specialists**, **Public Health Nurses**, and **Nurse Educators**. Industries include Hospitals/Clinics, Maternal & Child Health, Community Health Centers, NGOs (health outreach), and Rehabilitation Centers.

- **Registered Nurse (Clinical)** *Skills*: Patient care, clinical assessment, medication administration, IV therapy, infection control, communication (with patients/teams), empathy, teamwork, organization (patient charts), basic life support (BLS/CPR), medical equipment operation.
- **Midwife** *Skills*: Obstetric and neonatal care, delivery procedures, prenatal and postnatal care, patient communication, empathy, risk assessment, emergency response, breastfeeding support, antenatal education, cultural sensitivity.
- **Clinical Nurse Specialist (e.g. ICU, Oncology)** *Skills*: Specialized clinical procedures (ventilator care, chemotherapy prep), critical thinking, patient monitoring, advanced life support (ACLS), evidence-based practice, mentoring RNs, communication, teamwork, documentation.
- **Public Health Nurse** *Skills*: Community health assessment, health promotion/education, epidemiology basics, program planning, immunization campaigns, data collection (surveys), communication, cultural competence, networking with agencies, public speaking.
- **Nurse Educator** *Skills*: Teaching (curriculum design, lectures), clinical skills demonstration, mentorship, communication, evaluation (OSCEs), leadership, evidence-based nursing, organizational skills, academic writing, continuous professional development.

# **Pharmacy**

Pharmacy graduates most often work as **Pharmacists** in hospitals or community pharmacies, **Clinical Research Coordinators**, **Medical Representatives (Pharma Sales)**, **Quality Assurance/Control Specialists**, and **Regulatory Affairs Officers**. Industries include Hospitals, Retail Pharmacies, Pharmaceutical Companies, Research labs, and Regulatory Agencies (NAFDAC).

- **Pharmacist (Hospital/Community)** *Skills*: Pharmacology, dispensing and compounding medications, patient counseling, medication therapy management, drug interaction checks, communication, attention to detail, basic medical knowledge, record-keeping, legal compliance.
- **Clinical Research Coordinator** *Skills*: Clinical trial management, GCP guidelines, data collection, protocol understanding, communication, coordination with investigators, documentation, attention to detail, regulatory compliance (ethics), teamwork.
- **Medical Sales/Pharma Rep** *Skills*: Product knowledge, sales strategy, communication/presentation, negotiation, relationship-building with healthcare providers, market analysis, regulatory knowledge, time management, Microsoft Office (for reporting), persuasion.
- **Quality Assurance/Control Specialist** *Skills*: Quality systems (ISO standards), laboratory techniques (HPLC, spectrometry), documentation, validation and compliance, attention to detail, problem-solving, regulatory knowledge (FDA/NAFDAC), statistical process control, teamwork, continuous improvement.
- **Regulatory Affairs Officer** *Skills*: Regulatory guidelines (NAFDAC, NDLEA), dossier preparation, labeling requirements, communication with authorities, attention to detail, understanding of pharmacovigilance, project coordination, scientific writing, compliance monitoring, updates on health laws.

# **Civil Engineering**

Civil Engineering graduates work as **Site Engineers/Project Managers**, **Structural Engineers**, **Transportation/Traffic Engineers**, **Geotechnical Engineers**, and **Quantity Surveyors** (though QS is often separate, civil can fit). Key industries: Construction, Infrastructure (roads, bridges), Oil & Gas (structural and pipeline projects), Water Resources, and Government agencies.

- **Site/Project Engineer** (Construction firms, Oil & Gas, Infrastructure) *Skills*: Project planning, construction management, AutoCAD/Civil3D, surveying basics, materials testing, CAD/BIM, leadership, problem-solving, communication, health & safety compliance.
- **Structural Engineer** (Construction, Consulting) *Skills*: Structural analysis/design (SAP2000, ETABS), steel/concrete design codes, math (finite element), AutoCAD, attention to detail, project management, report writing, teamwork, problem solving, knowledge of building regulations.
- **Transportation/Highway Engineer** (Federal/State agencies, Consultancies) *Skills*: Traffic flow analysis, road design (AutoCAD Civil3D, ArcGIS), understanding of geometric design standards, project planning, surveying, data analysis, environmental impact assessment, communication, teamwork, budgeting.
- **Geotechnical Engineer** (Construction, Oil&Gas, Rail) *Skills*: Soil mechanics, foundation design, field/lab testing (soil sampling), geotechnical software (PLAXIS), risk assessment (slope stability), report writing, AutoCAD, attention to detail, critical thinking, communication.
- **Water Resources Engineer** (Consulting, Government e.g. water boards) *Skills*: Hydrology and hydraulics, CAD (HEC-RAS, SWMM), flood analysis, irrigation design, reservoir modeling, project management, GIS, environmental regulations, teamwork, communication.

# **Mechanical Engineering**

Mechanical Engineering grads serve as **Mechanical Design Engineers**, **Maintenance Engineers**, **Manufacturing Engineers**, **Project Engineers (Mechanical)**, and **HVAC/R Engineers**. Industries: Manufacturing (FMCG, Automobiles), Oil & Gas (maintenance of equipment), Power/Energy, Construction (HVAC), and Aeronautics.

- **Mechanical Design Engineer** *Skills*: CAD software (SolidWorks, AutoCAD, Inventor), 3D modeling, Kinematics and dynamics, materials engineering, product development, engineering calculations, FEA basics (ANSYS), attention to detail, creativity, teamwork.
- **Maintenance/Plant Engineer** *Skills*: Predictive/preventive maintenance planning, troubleshooting mechanical systems, knowledge of pumps/engines/rotating equipment, instrumentation basics, SAP/EAM systems, health & safety, problem-solving, equipment inspection, communication, reliability engineering.
- **Manufacturing/Production Engineer** *Skills*: Process engineering, CNC machining and automation, lean manufacturing, quality control (Six Sigma), production planning (MRP/ERP), material flow, AutoCAD, problem-solving, teamwork, communication.
- **HVAC/R Engineer** (Construction, Facilities) *Skills*: HVAC system design (size ductwork, BTU calculations), refrigeration cycles, AutoCAD/Revit MEP, thermodynamics, AutoDesk tools, energy efficiency, project management, compliance (building codes), problem-solving, attention to detail.
- **Project Engineer (Mechanical)** *Skills*: Project planning/scheduling, cost estimating, mechanical system design, AutoCAD/3D software, vendor coordination, material procurement, leadership, budgeting, troubleshooting, MS Office (Excel/Project), effective communication.

## **Electrical Engineering**

Electrical Engineering graduates become **Electrical Power Engineers**, **Control Systems Engineers**, **Instrumentation Engineers**, **Electronics Design Engineers**, and **Maintenance/Field Engineers**. Industries: Power generation & distribution (PHCN, NERC), Oil & Gas (electrical & control), Manufacturing (electronics), Telecom, and Renewable Energy.

- **Electrical Power Engineer** *Skills*: Power system analysis, distribution design, protection relays, SCADA, AutoCAD Electrical, MATLAB/ETAP, understanding of grid codes, substations, load flow studies, problem-solving, communication.
- **Control/Automation Engineer** *Skills*: PLC programming (Siemens, Allen-Bradley), SCADA/DCS, HMI design, sensors/actuators knowledge, troubleshooting, ladder logic, industrial networking, instrumentation, AutoCAD, teamwork, safety protocols.
- **Instrumentation Engineer** *Skills*: Process instrumentation, calibration, signal conditioning, control loops (PID tuning), HART protocol, instrument specification, pneumatic/electronic devices, documentation, problem solving, communication, attention to detail.
- **Electronics Design Engineer** *Skills*: Circuit design (analog/digital), PCB design (Eagle/Altium), microcontrollers (Arduino/ARM), signal processing, simulation (SPICE), soldering/prototyping, CAD, problem-solving, attention to detail, teamwork.
- **Electrical Maintenance/Field Engineer** *Skills*: Troubleshooting electrical equipment (motors, drives), preventative maintenance, electrical safety, AutoCAD reading, multimeter/VNA usage, system diagnostics, communication, ERP systems, reliability engineering, teamwork.

### **Architecture**

Architecture graduates typically work as **Architects/Building Designers**, **Urban/Regional Planners**, **Interior Designers**, **Construction Project Managers**, and **Landscape Architects**. Industries: Architecture/ Design firms, Real Estate/Property Development, Construction, Government (Town Planning), and Infrastructure (urban projects).

- **Architect/Designer** *Skills*: Architectural design, AutoCAD/Revit/BIM, 3D modeling (SketchUp, Rhino), building codes/regulations (Nigerian Urban and Regional Planning Laws), construction materials knowledge, creativity, drawing/rendering, project management, communication, teamwork.
- **Urban/Regional Planner** *Skills*: Spatial planning, GIS, land use planning, zoning laws, policy analysis, demographic analysis, public consultation, AutoCAD, presentation, sustainable development knowledge, statistical analysis, communication.
- **Interior Designer** *Skills*: Space planning, CAD (AutoCAD, 3ds Max), knowledge of materials/finishes, color theory, furniture design, lighting design, creativity, client communication, budgeting, project coordination, building services basics.
- **Construction Project Manager (Architecture)** *Skills*: Construction management, scheduling (MS Project), cost estimation, contract administration, site inspection, knowledge of architectural drawings, leadership, negotiation, guality control, Health & Safety compliance.
- **Landscape Architect/Designer** *Skills*: Site planning, landscape design, horticulture basics, CAD (AutoCAD Landscape), environmental sustainability, grading/drainage design, material knowledge, communication, GIS, creativity, project management.

# **Psychology**

Psychology graduates can become **Counselors/Psychotherapists**, **Clinical Psychologists**, **Human Resources Officers**, **Market Research Analysts**, and **Educational Psychologists**. Key sectors: Healthcare (mental health clinics, hospitals), Education (schools, NGOs), Corporate HR, Social Services (rehab centers, NGOs), and Research.

- **Counselor/Psychotherapist** *Skills*: Counseling techniques, active listening, empathy, psychological assessment, ethical practice, communication, critical thinking, record-keeping, confidentiality, basic knowledge of DSM/ICD disorders.
- **Clinical Psychologist** (with further qualifications) *Skills*: Psychological testing, diagnosis, therapy modalities (CBT, psychotherapy), empathy, research methods, data analysis (SPSS), ethics, communication, crisis intervention, teamwork.
- **HR Officer (Psychology)** *Skills*: Employee relations, recruitment/interviewing, training & development, conflict resolution, performance appraisal, organizational behavior, communication, empathy, MS Office, basic labor laws.
- **Market Research Analyst** (Media/Advertising) *Skills*: Survey design, statistical analysis, data interpretation, SPSS/R, report writing, communication, knowledge of consumer behavior, attention to detail, presentation skills.
- **Educational Psychologist** (Schools, NGOs) *Skills*: Learning assessment, developmental psychology, counseling, program development (IEPs), communication, observation, report writing, research methods, patience, teamwork.

# Sociology

Sociology graduates often work as **Social Researchers**, **Community Development Officers**, **NGO Program Managers**, **Policy Analysts**, and **Social Workers** (with additional training). Industries: NGOs/Non-profits, Government (social welfare agencies), Research/Think-tanks, Educational Institutions, and Corporate CSR departments.

- **Social Researcher** *Skills*: Qualitative & quantitative research (surveys, interviews, focus groups), data analysis (SPSS), report writing, critical thinking, communication, sociological theory, statistical methods, ethnographic skills, organization.
- **Community Development Officer** *Skills*: Program planning, grant writing, community engagement, communication, project management, social impact assessment, networking, cultural sensitivity, advocacy, monitoring & evaluation.
- **NGO Program Manager** *Skills*: Strategic planning, project management (timelines/budgets), stakeholder coordination, monitoring & evaluation, grant management, communication, leadership, cultural competence, report writing, adaptability.
- **Policy Analyst (Social Affairs)** *Skills*: Policy research, statistical analysis, writing policy briefs, stakeholder interviews, critical analysis, communication, knowledge of social policies (education, health), presentation, data interpretation, public speaking.
- **Social Worker** (with qualification) *Skills*: Counseling, case management, empathy, crisis intervention, community outreach, ethics, communication, problem-solving, patience, understanding of social support systems.

# **English Language**

English majors often pursue careers as **Editors/Content Writers**, **Teachers/Educators**, **Public Relations Officers**, **Copywriters**, and **Speech/Communications Specialists**. Industries include Media & Publishing, Education (schools, tutoring), Corporate Communications, Advertising/PR Agencies, and NGOs.

- **Editor/Content Writer** *Skills*: Writing and editing (AP/Chicago style), grammar and vocabulary mastery, research, creativity, SEO basics (for digital), communication, attention to detail, time management, content management systems, teamwork.
- **Teacher/Lecturer (English)** *Skills*: Lesson planning, curriculum development, classroom management, communication, public speaking, assessment design, creativity, cultural sensitivity, patience, mentorship.
- **Public Relations/Communications Specialist** *Skills*: Corporate communications, media relations, press release writing, storytelling, social media management, crisis communication, copywriting, networking, presentation, organizational skills.
- **Copywriter** (**Advertising/Marketing**) *Skills*: Creative writing, brand voice development, storytelling, SEO and keyword usage, marketing fundamentals, client communication, brainstorming, brevity, adaptability, time management.
- **Speech/Communications Coach** *Skills*: Public speaking training, presentation skills, voice modulation, listening, confidence-building techniques, communication theory, interpersonal skills, patience, feedback, cultural awareness.

#### **Mathematics**

Mathematics graduates often become **Statisticians/Data Analysts**, **Actuaries (with certification)**, **Quantitative Analysts**, **Teachers/Lecturers**, and **Operations Researchers**. Industries: Finance/Banking, Insurance, Tech/Software (algorithms), Education, Government Research, and Consultancies.

- **Data Analyst/Statistician** *Skills*: Statistical analysis, programming (R/Python), SQL, data visualization (Tableau/PowerBI), data cleaning, probability theory, problem-solving, communication, modeling, Excel.
- **Actuary** *Skills*: Probability and statistics, financial mathematics, actuarial modeling, programming (VBA/ Python), problem-solving, communication, risk analysis, spreadsheet modeling, certification (SOA/ICAS exams prep).
- **Quantitative Analyst** (Finance) *Skills*: Mathematical modeling, programming (Python/Matlab), data analysis, machine learning basics, finance theory, risk modeling, communication, database querying, stochastic processes, attention to detail.
- **Math Teacher/Lecturer** *Skills*: Mathematical knowledge, teaching skills, lesson planning, communication, patience, curriculum development, assessment design, tutoring, problem-solving, continuous learning.
- **Operations Research Analyst** *Skills*: Optimization techniques (linear programming), simulation modeling, programming (Python/Excel Solver), statistics, critical thinking, problem formulation, communication, data analysis, decision theory, software tools (CPLEX, R).

## **Physics**

Physics graduates can work as **Research Scientists**, **Electronics Engineers**, **Medical Physicists**, **Lab Technicians**, and **Educators**. Industries include Education/Academia, Research Labs, Healthcare (imaging/radiology), Energy (renewables), and Manufacturing (semiconductors).

- **Research Scientist** *Skills*: Experimental design, data analysis, familiarity with lab equipment (e.g. spectrometers), programming (Python/Matlab), scientific writing, problem-solving, critical thinking, teamwork, optics/electronics knowledge (depending on field), Matlab.
- **Electronics/Instrumentation Engineer** *Skills*: Analog/digital electronics, circuit design (Multisim/Altium), signal processing, embedded systems (Arduino/Pi), soldering/prototyping, troubleshooting, microcontrollers, teamwork, PCB design, communication.
- **Medical Physicist** *Skills*: Radiation physics, imaging equipment operation (MRI/X-ray/CT), dosimetry, MATLAB/Python, understanding of hospital protocols, attention to detail, certification processes, communication, safety standards.
- **Laboratory Technician** *Skills*: Lab equipment operation (particle counters, vacuum systems), measurement and instrumentation, calibration, data recording, safety protocols, problem-solving, attention to detail, equipment maintenance, teamwork, basic electronics.
- **Physics Educator (Teacher/Lecturer)** *Skills*: Physics knowledge, teaching skills, experiment demonstration, communication, curriculum design, problem-solving, patience, assessment, technology use (simulations), mentorship.

### Chemistry

Chemistry graduates find roles as Chemists (Analytical/Process), Quality Control/Assurance Chemists, Formulation Scientists, Laboratory Managers, and Environmental Health Officers. Industries include

Pharmaceuticals, Petrochemicals, Food & Beverages, Cosmetics, and Environmental Agencies.

- **Analytical/Research Chemist** *Skills*: Laboratory techniques (titration, chromatography, spectroscopy), data analysis, chemical safety, instrumentation (GC-MS/HPLC), report writing, problem-solving, attention to detail, teamwork, computer data logging, method development.
- **Quality Control (QC) Chemist** *Skills*: Standard operating procedures, analytical testing (HPLC, GC), calibration, documentation (ISO/GMP standards), attention to detail, troubleshooting, Microsoft Office (for reports), communication, regulatory compliance, sampling.
- **Formulation/Product Chemist** *Skills*: Knowledge of formulations (drugs, cosmetics, polymers), scaling-up processes, stability testing, experimentation, CAD for process equipment, creativity, teamwork, documentation, regulatory guidelines, project management basics.
- **Laboratory Manager** *Skills*: Lab management, safety compliance (laboratory standards), inventory control (chemical stocks), team leadership, budgeting, quality systems (ISO17025), troubleshooting equipment, scheduling, communication, training staff.
- **Environmental Chemist/Safety Officer** *Skills*: Environmental sampling, pollution analysis, waste management regulations, safety protocols (hazardous materials), spectroscopy/chemical analysis, report writing, communication, GIS basics (for site mapping), attention to detail, project coordination.

## **Biology**

Biology graduates often work as **Biological Scientists/Researchers**, **Microbiologists/Biotechnologists**, **Medical Laboratory Scientists**, **Environmental Conservationists**, and **Science Educators**. Industries: Healthcare (labs, pharma), Research Institutes, Agrochemical companies, Environmental NGOs, and Education.

- **Research Biologist** *Skills*: Experimental design, cell/molecular techniques (PCR, microscopy), data analysis (bioinformatics basics), scientific writing, lab safety, problem-solving, critical thinking, teamwork, continuous learning, microscopy.
- **Microbiologist/Biotechnologist** *Skills*: Microbial culture, fermentation, aseptic techniques, molecular biology (DNA/RNA analysis), bioreactor operation, data analysis, quality control, lab equipment handling, attention to detail, report writing.
- **Medical Laboratory Scientist** *Skills*: Clinical lab techniques (hematology, immunology tests), analyzer operation, quality control, phlebotomy basics, lab information systems, troubleshooting, attention to detail, communication (with clinicians), medical ethics, certification (MLSCN).
- **Environmental Conservation Officer** *Skills*: Field survey methods, species identification, GIS mapping, environmental impact assessment, report writing, communication, data collection, ecological research, grant writing, teamwork.
- **Biology Educator (Teacher/Lecturer)** *Skills*: Biological knowledge, curriculum development, experiment demonstration, communication, assessment design, patience, educational technology, mentoring, research aptitude, continuous education.

**Sources:** Industry and career guides (e.g. Nexford University job reports <sup>19</sup> <sup>15</sup> ), educational and professional websites (e.g. Suresuccess on computer science careers <sup>1</sup> , NIMN marketing careers <sup>27</sup> , Techpoint tech skills <sup>6</sup> <sup>3</sup> , Superprof law careers <sup>8</sup> <sup>13</sup> ) were consulted to identify common roles, industries, and requisite skills. Each role's skills combine cited recommendations and standard industry expectations (e.g. communication, analysis, domain-specific tools and methods) <sup>29</sup> <sup>31</sup> <sup>6</sup> <sup>20</sup> .



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<sup>27</sup> <sup>28</sup> <sup>29</sup> <sup>30</sup> Job opportunities for Nigerian marketing students – National Institute of Marketing of Nigeria https://www.nimn.com.ng/job-opportunities-for-nigerian-marketing-students/

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