

**OLUSEGUN AGAGU UNIVERSITY OF SCIENCE AND TECHNOLOGY
(OAUSTECH), OKITIPUPA, ONDO STATE, NIGERIA**



INSTITUTE OF STEM EDUCATION

Postgraduate Diploma in Education

**OLUSEGUN AGAGU UNIVERSITY OF SCIENCE AND TECHNOLOGY (OAUSTECH),
OKITIPUPA, ONDO STATE, NIGERIA**



INSTITUTE OF STEM EDUCATION

A Proposal for Postgraduate Diploma in Education

Introduction

There is no doubt that there is a serious shortage of qualified teachers in the areas of Science, Technology, Engineering and Mathematics. Schools are springing up on daily basis at primary, secondary and higher institutions of learning by private agencies, individuals, cooperate bodies, religious bodies, philanthropists, business organizations, states and federal Government and stakeholders. There is therefore the need for teachers at all levels of education to be properly trained in the pedagogy of teaching in order to facilitate effective teaching and learning. Ondo State is a fast-growing state with a high number of school-age children without a commensurate number of available trained and certified science teachers to teach in schools, there is therefore the need to meet the market demand for a supply of trained teachers in schools.

Philosophy and Aim of the Programme

The primary objective of the Institute of STEM Education is to meet the urgent need to train current teachers in the state who have not received training in the field of education and other prospective teachers. The institute is to co-operate with other agencies on general matters of educational interests, to update teachers' academics and professional knowledge so as to adequately cope with current demands of globalization. A high level of professional preparation and the ability to adapt to changing situation are among the competencies emphasized in the teacher education section of the NPE (2014). The Institute is to run programmes in Postgraduate Diploma in Education and higher degrees in Education.

Objectives of Postgraduate Diploma Education Programme

The programme is designed to offer practicing teachers adequate competence required as well as equip them with modern pedagogical techniques of teaching.

The specific objectives of the Institute of STEM Education, in line with the National Policy on Education (FGN, 2004) are:

- to supply qualified teachers and school administrators in the area of STEM Education in Ondo State and beyond.
- to offer opportunities for graduates of OAUSTECH who are inclined and interested in taking teaching as a profession.

- a veritable avenue for in-service training, research and professional upgrading in Nigeria schools.
- A stable platform for meeting the training needs of school teachers and principals, who are critical stakeholders in the education industry in Ondo State and Nigeria.
-

Proposed Programmes of the Institute

The proposed Institute of STEM Education will offer courses leading to the awards of:

- (i) Postgraduate Diploma in Education
- (ii) Master/M.Phil/Ph.D in Data Mining
- (iii) Master/M.Phil/Ph.D in Technology Education
- (iv) Master/M.Phil/ Ph.D in Science Education

Currently, the Institute shall commence with the Postgraduate Diploma in Education (PGDE) for the 2023/2024 Session and it will run full-time and part-time programmes according to the needs of the target audience.

Admission Requirements For PGDE

1. Entry Qualifications

Candidates who possess any of the following qualifications are eligible for admission into the programme:

- i. Bachelors; Masters; Doctorate Degree
- ii. Higher National Diploma (HND)

In addition, candidate must possess O' level Certificate or its equivalent with at least five credit passes including English language and relevant subjects in not more than two sittings.

2 Types of Admission

Full-Time/Part-Time Admission

This is a one (1) calendar year full-time study of two semesters. The mode of instructions follows the conventional pattern of face-to-face, teacher-student interaction

3 Duration of the Programme

The minimum duration for the programme is one academic session of two semesters. However, in the event of failure (or other justifiable reasons for programme extension), the affected candidate shall spend an additional period of not exceeding one session of two semesters to remedy such problems. At the expiration of the additional session, the studentship of such student shall be deemed to have lapsed if the student could not complete the programme successfully. For a good reason, a paid-up student could suspend studies and/or defer admission for a period not exceeding one academic session (two semesters) only.

4 Withdrawal from the Programme

A registered PGDE student shall be asked to withdraw from the programme on grounds of any of the following:

- i. Unsatisfactory academic performance

- ii. Poor and irregular lecture attendance (below 75% attendance)
- iii. Ill-health without certified medical report
- iv. Examination malpractice
- v. Stealing, fighting, insubordination to college staff and other acts capable of disrupting the peace in the Institute and the University
- vi. Voluntary withdrawal by the student

5 Requirements for the Award of Postgraduate Diploma in Education (PGDE)

To qualify for the award of Postgraduate Diploma in Education, candidate must have registered and passed **ALL** the prescribed courses for the programme.

Each student's performance shall be based on:

- a. Continuous Assessment and final examination in the taught courses (Continuous Assessment shall account for 40% of a student's grade for each course taught).
- b. Assessment of supervised teaching practice
- c. Assessment of research project.

Calculation of GRADE POINT

TNU	TUP	TUR	WGP	GPA	GRD	RMKS
40	40	40	171	4.28	A	Distinction
40	40	40	147	3.68	B	Credit
40	40	40	139	3.48	C	Merit

TNU=Total Number of Units

TUP=Total Unit Passed

TUR=Total Unit Required

WGP=Weighted Grade Point

GPA= Grade Point Average

GRD = Grade

6 Course Work Grading System

The Course Grading will follow the system below:

<u>Score Range</u>	<u>Letter Grade</u>	<u>Grade Point</u>
70 and above	A	5.00
60-69	B	4.00
50-59	C	3.00
0 -49	F	0.00

7 Interpretation of Grade

4.50 - 5.00 = A=Distinction

3.50 - 4.09 =B = Credit

2.50 - 3.49=C=Merit

1.00-2.49=D=Pass

The Final Grade and the class of the degree shall be based on the Cumulative Grade Point Average (CGPA) obtained by each candidate in all prescribed courses. The final cumulative grade point average shall be calculated on the basis of the total number of credit points and the total number of course units registered for during the course of the student's programme, in case of a failed course, the candidate must repeat the course at the next available opportunity. The failed Grade would however, be reflected in the transcript,

PGDE PROGRAMMES

Course Contents, Units/ Credit Load

A minimum of **40 credits** is stipulated for the programme. The credits are distributed across the two semesters as depicted below:

FIRST SEMESTER

UNITS

PGDE 701	Introduction to Teaching Profession	2
PGDE 703	History of Nigeria Education	2
PGDE 705	Sociological and Psychological Foundations in Education	2
PGDE 707	Educational Technology	2
PGDE 709	Measurement and Evaluation in Education	2
PGDE 711	Introduction to Educational Management	2
PGDE 713	Method Courses	2
PGDE 715	Curriculum Design and Development	<u>2</u>
		16

SECOND SEMESTER

PGDE 702	Developmental Psychology	2
PGDE 704	Introduction to Guidance & Counselling	2
PGDE 706	Introduction to Research Education	2
PGDE 708	Philosophy of Education	2
PGDE 710	Adult and Non-Formal Education	2
PGDE 712	Introduction to Computer Education	2
PGDE 714	Introduction to Special Education	2
PGDE 716	Comparative Education	2
PGDE 718	Teaching Practice	4
PGDE 720	Research Project (Long Essay)	<u>4</u>
		28

COURSE DESCRIPTION

PGDE 701: INTRODUCTION TO TEACHING PROFESSION

Concept of teaching, The teacher: A school, community and nation builder, The concept of learning, The Learning Environments, Professionalization of Education, Ethics of Teaching, Professional Qualities and Competencies of a Teacher in the 21st Century, Examination Malpractice in the Nigerian Educational System, The Teachers' Help-Meet, Effectiveness of Locally Developed,

Designed, Produced and Use of Teaching and Learning Materials in the Educational System, Instructional Methods in the Classroom, Stages Involved and Stakeholders' Responsibilities in Teaching Practice Exercise.

PGDE 702: DEVELOPMENTAL PSYCHOLOGY

Basic Processes of Growth and Development, Factors that Affect Growth and Development, Stages of Human Development I: Conception to Childhood, Theories of Personality Development, Theories of Cognitive Development, Social-Emotional Development Theories: Their importance in the school Years, Adolescence Psychology I: Meaning and Development Tasks of Adolescence, Adolescence Psychological II: Physical Characteristics of Adolescents, Adolescence Psychological III: Emotional Characteristics of Adolescents, Stages of Human Development-Adulthood Development

PGDE 703: HISTORY OF NIGERIA EDUCATION

The Nature, Scope and Process of Traditional Education in Nigeria, The Islamic System of Education in Nigeria, The Advent of Western Education in Nigeria: 1919 and Beyond, History of Education in Nigeria, Secondary and Higher in Education.

PGDE 704: INTRODUCTION TO GUIDANCE & COUNSELLING

Concept of guidance and counselling, historical development, differences between guidance and counselling, guidance and counselling in Nigeria, relevance of guidance and counselling to education

PGDE 705: SOCIOLOGICAL AND PSYCHOLOGICAL FOUNDATIONS IN EDUCATION

The school as an agent of socialization and social development. The consequence of social stratification as well as social occupational mobility for educational achievement. The family and the process of education maintaining healthy school climates. The school, the pupil and social pathology. The science of psychology and Behaviour patterns among adolescents and children. Individual differences. The influences of heredity and environment and human development. Cognitive development, Development Tasks Among secondary school students. Human Motivation and affecting mental health and classroom teaching.

PGDE 706: INTRODUCTION TO RESEARCH EDUCATION

Research concept, research methodology, parts of a research, hypothesis, literature review, data collection, analysis and referencing.

PGDE 707: EDUCATIONAL TECHNOLOGY

Meaning of Educational technology, history of educational technology, educational resource centre, communication process, instruction design, system approach, instructional material

PGDE 708: PHILOSOPHY OF EDUCATION

Concept of education, aims and goals, meanings and scope of philosophy and education, national policy on education, curriculum development, personality development

PGDE 709: MEASUREMENT AND EVALUATION IN EDUCATION

The Concepts of Test, Measurement, Assessment and Evaluation in Education, Assessments and Evaluation in Education, Assessment and Classroom Tests, Types of Tests, Characteristics of Good Tests and Test Construction, Basic Principles of Test Construction, Test Contingencies, Test Scoring and Interpretation of Test Scores

PGDE 710: ADULT AND NON-FORMAL EDUCATION

An Examination of the General Concept and Structure of Adult and Non-Formal Education, Historical Development of Adult and Non-Formal Education, Principles and Practice of Adult Education, Methods and Materials in Adult Education, Analysis of pattern of Adult Participation on Adult and Non-Formal Education, The National Policy on Adult Education, Administrative Structure of Adult Education in Nigeria, Aspects of Non-Formal Education, Adult Education and Rural Development in Nigeria.

PGDE 711: INTRODUCTION TO EDUCATIONAL MANAGEMENT

Introduction to Educational Management, Educational Management as a Social Process, School Plant Management, Management and Control of Education in Nigeria, Concept of Management and Administration, Educational Law, Organogram, Education Board, School Record, Management of School Resources, Theories of Management.

PGDE 712: INTRODUCTION TO COMPUTER EDUCATION

Historical development of computer, parts of computer, computer learning and teaching data storage device, computer science educational methods

PGDE 713: METHOD COURSES

Concept of teaching methods, questions and questioning techniques, the teacher and the child, lesson plan

PGDE 714: INTRODUCTION TO SPECIAL EDUCATION

A Brief History of Special Education, Definitions, Scope and Purposes of Special Education, Characteristics of the Exceptional Child-Diagnosis and Remedial Strategies, Curriculum Provision for the Special Learner/Exceptional Child.

PGDE 715: CURRICULUM DESIGN AND DEVELOPMENT

Curriculum and Instruction, Major Concepts and types of Curriculum Foundation of Curriculum, Curriculum Development Process, Definition a meaning of Instruction: Structure of Curriculum and Instruction, Some Special Methods of Teaching and their Major Characteristics

PGDE 716: COMPARATIVE EDUCATION

The Concept and Scope of Comparative Education to Teacher Education Programmes, Factors that Determine the Character of Different Nations, Factors Determining the Character and Development of Education in Different Nations, Variations among Nations in Educational Aims, Curriculum,

Methods and Administration, British and French Educational Policies in Colonial Africa, Comparative Educational Policies and Practices in Africa Since Independence, Educational System In Nigeria And Tanzania.

PGDE 718: TEACHING PRACTICE

A 6-week supervised teaching practice activity in any formal setting such as recognized secondary schools. The candidate is expected to devote an average of 5 to 8 hours per week to the practicum. The course is designed to develop professionals who are prepared to meet challenges of the 21st century classrooms and workplace. It will also develop the knowledge, skills and attributes of pre-service teachers to prepare them to teach effectively in the school systems. This will help the candidates understand the full scope of teachers' role.

PGDE 720: RESEARCH PROJECT (LONG ESSAY)

The Honours project in Postgraduate Diploma Education will consist of a typewritten report on some approved and supervised topics in the field of science education. The candidate is expected to either give a short seminar or be examined orally on the approved report or give practical demonstration of teaching process.

List of Staff for Postgraduate Programmes

S/N	Name	Qualifications	Status	Specialization
1.				
2.				
3.				
4.				
5.				
6.				
7.				

Minimum of Masters' holders in Education will be recruited within and outside the University for the programme.

Proposal for Funding the Institute of STEM Education

This proposal is on behalf of the Institute of STEM Education. The Institute of STEM Education is focused on providing quality education in Science, Technology, Engineering, and Mathematics (STEM). The aim is to nurture students, equip them with relevant skills, and foster a deep passion for STEM subjects. The initiative will lay a solid foundation for future generations and contribute to their success in this rapidly advancing digital age. The Institute of STEM Education is a pioneering educational institution dedicated to promoting STEM learning. It is technologically-driven, emphasizing critical thinking, problem-solving, and creativity. With an experienced team of educators and state-of-the-art infrastructure, it will be committed to providing an exceptional learning experience and professional acquisition.

I. Financial Requirements

To effectively launch and sustain the Institute of STEM Education, the students have financial obligations to fulfil to cover various aspects of its operations, as summarized below:

1. **School Fees:** N120,000 is proposed per session for each student which can be paid twice on semester basis. This fee structure will ensure the sustainability of the operations of the Institute to attract a substantial student population.

2. **Application Form:** Candidates should process their applications online on the university website <https://www.istemedu.oaustech.edu.ng> and payment made accordingly. Each candidate is expected to pay the sum of N15,000 only for the online application form.

3. **PGDE Acceptance Fee:** A non-refundable fee of N20,000 will be charged to students who have been given admission into the Postgraduate Diploma in Education (PGDE) programme.

4. **Separate Account for Institute of STEM Education:** I propose the creation of a dedicated and separate account for everything that has to do with the Institute of STEM Education in order to enable transparent financial operations and facilitate accurate tracking of revenue and expenses.

5. Financial Projection for PGDE 2023/2024 Academic Session

S/N	ITEM	NO	AMOUNT	QUANTITY	ESTIMATED COST	ESTIMATED BALANCE
1.	Anticipated Number of Students	40	-	-	-	-
2.	Expected Revenue:					
	i.Application fee per student	40	#15,000.00			
	ii.Acceptance fee per student	40	#20,000.00			
	iii.Tuition per student	40	#120,000.00	X 40	#4,800,000.00	
	Total				#4,800,000.00	+ #4,800,000.00 -
3.	Expected Expenditures:					
	i.Part-Time lecturers	10				
	ii.Salary for lecturers per semester (12 weeks)					
	1 st Semester		#30,000.00	X 10	#300,000.00	
	2 nd Semester		#30,000.00	X 10	#300,000.00	

	Total				#600,000.00	-\$600,000.00
	iii.Administrative Staff Renumeration for Administrative staff	2				
	1st Semester		#7,000.00	X 2	#14,000.00	
	2nd Semester		#7,000.00	X 2	#14,000.00	
	Total				#28,000.00	-\$28,000.00
	iv.Special Expenditure/Miscellaneous (Printing, stationery, markers, cellotape etc)					
			#200,000.00		#200,000.00	-\$200,000.00
	Printer	1	#100,000.00	X 1	#100,000.00	-\$100,000.00
	Laptop	1	#200,000.00	X 1	#200,000.00	-\$200,000.00
	Riso Photocopier	1	#300,000.00	X 1	#300,000.00	-\$300,000.00
4.	Rebate to the University (30% of Total Revenue Generated)		30% of #4.8m	-	#1,440,000.00	-\$1,440,000.00
5.	Estimated Balance					#1,932,000.00

II. Recruitment of Staff

To deliver an exceptional educational experience, highly qualified and dedicated team of educators who share the vision for promoting STEM Education will be needed. These educators can be recruited within and outside the institution based on their educational qualifications; at least not less than a Master's degree in Education. Payment would be made based on the units of the courses taught and sharing formula.

III. Infrastructure and Facilities

1. **Space for Teaching:** I propose Olusegun Agagu University Mega Hall at Ayeka, Okitipupa for lecturing.

2. **Time for Lectures:** Lectures hold on school vacations and designated weekends.

3. **Space for Administrative Work:** I propose a separate and well-equipped office for the Director, Institute of STEM. In addition, a separate office for other administrative staff and a secretary for the effective functioning of the Institute.

4. Administrative Staff and Secretary: A well-organized administrative team is essential for the smooth functioning of any educational institution. I propose a qualified administrative staff, including a secretary to manage daily operations effectively.

IV. Publicity Materials

1. Handbills and Flyers: To spread awareness and attract potential students, I propose the need to design and print informative handbills and flyers highlighting the advantages of the STEM programmes. I attached a designed handbill as sample.

2. Jingles and Posters: Engaging jingles for radio advertisements and visually appealing posters to display in public areas will play a vital role in promoting the institute.

Conclusion

This proposal will allow us to establish and sustain the Institute of STEM Education. I firmly believe that the Institution will contribute significantly to the development of students, the University and the overall growth of the community.

Thank you for considering the proposal. I am available to discuss any further details or providing additional documentation to support the proposal. I look forward to a positive response to make a meaningful impact in the Institute of STEM education.

Dr. (Mrs.) B.B. Adeyemi