

Department of Geography
Faculty of Earth and Environmental Sciences
Bayero University, Kano

Undergraduate
Handbook

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MISSION STATEMENT

Our mission is to train students that would be the most informed citizens of tomorrow in terms of proper understanding of both the physical and human environment and with deep understanding of the dynamics of man's relationship with his environment towards achieving a more sustainable and friendly world.

WELCOME TO GEOGRAPHY AT BAYERO UNIVERSITY

This Handbook introduces you to the Geography Department, courses and lecturers in the department. It provides information which should be useful throughout your stay as an undergraduate student of the department. We hope you will find it useful and that you will keep it for future reference.

As Geographers you will be studying alongside students in at least four other faculties apart from your own faculty of Earth and Environmental Sciences in this University: Faculties of Social Sciences, Life and physical Sciences and Education. This makes it possible for you to meet and make friends with whom you share ideas in all courses in the Departments in these Faculties. We are sure most of you will have come straight from secondary schools, but you will also be studying alongside older students who have decided to return to higher education many years after leaving school. There may be a few students from other countries and continents. This mix of student background and interests is one of the things that make Geography at Bayero interesting and stimulating.

Geography has been taught at Bayero since the times when the University was a college in the early 1970s. The Department has grown sharply from the 1980s when it assumed international recognitions in research and teaching. Of course, its relations with universities and Foundations that focus education in Europe and America have helped in this development. Many staff and students who have passed through the Department have trained and developed to manage key areas of national and international development.

Bayero Geographers work in areas of diverse interest both in the urban and rural areas where they study a wide range of critical environmental, economic, demographic, cultural and health issues. They have strong contacts and linkages with universities in Nigeria and other countries. Of course, all of you will have the opportunities to visit and carry out researches, at least, in other parts of Nigeria.

It needs to be pointed out to you that contemporary work in geography is challenging and intellectually demanding. Through your studies, you will be introduced to ideas and approaches that are new and sometimes difficult and alien. You will learn new methods of analysis and interpretation. For this reason you need to read deeply and widely. Study contemporary debates and controversies. You will be exposed to the use and usefulness of computerization. All of these are meant for you to develop geographic eyes and minds. The eyes and minds that see beyond what ordinary people see, and that reason beyond what and how they reason. You will be trained to challenge ideas and to evaluate competing explanations, including developments in related disciplines. Geography at Bayero is interdisciplinary to a much greater extent than in other universities. Along the way you will acquire new skills, learn how to read critically, conduct field work, carry out investigative projects and make presentations. Hopefully these skills will be of value to you in your future life.

We hope that you will enjoy yourself and make new friends and that you find the course interesting. We hope you will learn a lot, and that what you learn will be of value to you and to Nigeria, Africa and the world in the years ahead. Good luck with the course and with your stay at Bayero.

GEOGRAPHY DEPARTMENT - A HISTORICAL SKETCH

Write below a brief history of the development of the Programme/Sub-discipline/Discipline to be accredited.

The Department of Geography at Bayero University was first established under the Abdullahi Bayero College (ABC) of the Ahmadu Bello University (ABU) fondly referred to as ABC/ABU in the early 1970s. It was initially a Department in the Faculty of Arts and Islamic Studies,

teaching A-Level Geography to students requiring A-Level qualification for degree courses at both ABC/ABU at Kano and ABU at Zaria.

In the 1973/74 session, under the headship of the first Head of Department, Mr. Hamza Nganjiwa, the Department began teaching degree programmes for combined Honours and Education students. At the beginning of the 1974/75 session, the Department persuaded two of its B.A. (ED) students to offer B.A. Geography (Single Honours). One of them was Dr. S. Patrick, who became a staff member and attained the position of a Senior Lecturer before he left (first, on leave of absence to take up a position of State Commissioner in Adamawa State, and eventually transferred his services to the State). Out of the Departmental Academic Staff of the time, only Emeritus Professor E.A. Olofin (who assumed in January 1974) is still in the services of the University.

The Department remained in the Faculty of Arts and Islamic Studies until the 1976/77 session when the ABC/ABU became a University College of Ahmad Bello University, Zaria and a new Faculty (Social and Management Sciences) was established. The Department was then transferred to that Faculty. Meanwhile, the second Head of Department Professor F. Beavington, a Briton, assumed duties in the 1975/76 session. The Department grew in number (of staff and students) with the growth of the University and the establishment of the Faculty of Science where geography was also offered as a degree programme. The College became a full-fledged University in the 1977/78 Session.

From the end of Professor Beavington's tenure in 1980 until 1986 when he left Nigeria, Professor Michael J. Mortimore also a Briton, became the third Head of Department. Dr. E.A. Olofin (now Emeritus Professor) became the fourth Head of Department from 1986 to 1993 (except in the 1987/88 session) when Dr. (now Professor of Soil Science in the Faculty of Agriculture) E.U.Essiet acted as Head of Department. Professor Kabiru Ahmed (who completed two terms as the Deputy Vice-chancellor, Academics 2007 - 2010) assumed office as Head of Department in February 1993 and remained so until 31st January 1998. A.D. Maiwada took over from him as head from 1998 to 2002. He was followed by Professor J. Afolabi Falola who assumed headship in August 2002 and remained in office until August 23rd 2005 when M.A. Liman (Dr. and

pioneer HOD Urban and Regional Planning) took over (2005 to 2009). Then Dr. A.I. Tanko (now Professor, former Dean SMS, pioneer Dean FEES and currently the Deputy Vice Chancellor Academics) assumed office from November 2009 to June 2012 who relinquished his position as head to take up the deanship of Faculty of Social and Management Sciences. Dr. Maharazu A. Yusuf (now a professor and the current Dean of FEES) took over from 25th June 2016. Prof Yusuf M. Adamu was the Head from 2016-2018 and doubled as the Director University Press. Assoc. Professor Salisu Mohammed (the former Sub Dean academics) is the present head who took over in 2018.

The Geography Department was based in the Faculty of Social and Management Sciences (FSMS), it was a core Department in the Faculty of Science until the 2011/12 session. It taught more undergraduate Science students than those in the Social Sciences. Moreover, students in the Faculty of Education offer Geography as teaching subject (BSc. Ed. and B.A. Ed), and other combinations in Library and Information Science Department, Adult Education Department and also Science and Technical Education Department, Special Education.

In 2014, the Department gave birth to a new Faculty of Earth and Environmental Sciences (FEES). Geography department was split into three Departments: Departments of Urban and Regional Planning and Environmental Management and some staff were transferred to form their core staffing. Four additional departments namely, Geology, Estate Management, Quantity Survey and Architecture were introduced. The department is planning to mount a new B.Sc. programme in Meteorology next session which has been approved by the university authority.

The Department started Postgraduate Programme (M.Sc.) in Land Resources (Administration and Development) in the 1983/84 session. Late in the 1980s, PhD (by research) Programme began in the Department. However, with the new position of the National Universities Commission (NUC) course work was developed and introduced into the Postgraduate Curriculum in 2002. In the 1994/95 session the Department introduced a Postgraduate Diploma Programme with three options (Environmental Management, Land Administration and Soil Evaluation). A Master's Programme in Environmental Management (MEM) began in the

Department in the 2005/2006 academic session. The Department in the 2011/12 session introduced Master of Science and PhD degree programmes in Geography with specializations in seven areas: Physical Geography, Human Geography, Environmental Management, Population and Development, Development Geography, Climate Change and Development, and Geographic Information System. In 2014/2015 session new MSc and PhD programmes in Natural Resource Management and Climate Change were mounted. These programmes are supported by the Centre for Dryland Agriculture and attract students from many African Countries. In 2018, a new professional Masters of Geographic Information System (GIS) was also mounted.

The Department has grown from a seedling of two students and four lecturers in 1974, to an Iroko of about 330 undergraduate, over 200 postgraduates (including PhD) students, with an academic staff strength of thirty (30).

INFORMATION, SUPPORT AND GUIDANCE LEVEL COORDINATORS

On arrival and collection of admission letters, students are allocated Level Coordinators. These are normally members of academic staff who function as academic and personal counsellors. They provide advice and answer questions in connection with the choice of courses during registration. They also sign student's registration materials. The Coordinator will also be prepared to discuss, where appropriate, any difficulties that the student may experience in the course of his studies. At the end of each Semester, the Coordinator collates the results of the students (under his stewardship). This is sent to the Senate for final approval after departmental and faculty Board meetings.

NOTICE-BOARDS

Separate notice-boards are provided for Levels I, II, III and IV. Students are strongly advised to consult these notice-boards, at least twice, every working day. Notices must not be placed on lecture rooms doors, etc. All notices should be fixed on the notice boards.

LECTURE ROOMS

Careless use of furniture leads to breakage and loss of items essential for class work. The classrooms Theater Fa, Ha Micheal Mortimore-Thearter E.A. Olofin-Threarter CB17, CB08, CB09, CB10, CA09 and CA10, Cartography-Room, G.I.S-Lab and NRM Class) are only used for lectures and practical and, at other times, used for seminars. They may be available for private studies at certain times subject to permission by the Head of Department.

DEPARTMENTAL READING ROOM (LIBRARY)

The reading room contains a reference collection of books and is available for use to students subject to rules, which are posted in the Room. It should be noted that the use of this Room depends on strict observance of the Rules. Infringement of these may lead to closure. The Library has a Data Collection Unit (PG Collection), which for want of space occupies a section of the Book Collection. It is essentially a section of research data for the use of staff and graduate/research

students. Undergraduate students may use it on written authorization from a member of staff.

A Departmental Library Committee, which has staff members and student representatives from each year, advises the Head of Department on all aspects of the use and development of the Departmental Library. Only authorized students (especially from other departments) may use the Departmental Library. Enquiries should be directed to the Library Assistant.

CARTOGRAPHIC AND GEOGRAPHIC INFORMATION SYSTEM (GIS) LABORATORIES

The Cartographic and GIS laboratories (CB18 and CB19) are responsible for map reproduction and technical services. In addition to these, the labs have collection of maps which may be used for reference by authorized students on request to the Chief Technical Officer or his Assistant. Loan of Maps is only permitted on written authorization from a member of staff. The Units are under the supervision of the Chief Technical Officer (Cartography) and is out of bounds to students, except at times specified for authorized consultation. Remote Sensing equipment and materials are also kept in the cartographic lab.

EXAMINATION OFFICE

Room CB14 is used as Examination Office where examination records are kept such as exam booklets, question papers, results and transcripts. There are other facilities like printer, computer and photocopying machine.

SOIL AND WATER LABORATORY

This Research and Teaching Laboratory (A28-32) locates in the basement/ground floor below the old Departmental Office. It houses most of the laboratory equipments used for the analyses of soils, water and plant. When not in use for lectures and analysis, it is strictly out of bounds to students.

DEPARTMENTAL OFFICE

The Departmental Office occupies Rooms (CB01 – CB03) while staff offices are found on both the B, C and G (CB04-CB07 in Block C, Bb01-CB14 in Block B and GA01, GB09, GB10 and GB13 in Block G). Students are encouraged to get familiar with these locations. However, all enquiries of an administrative nature should be directed to the Officer in the Departmental Office (CB01).

REGISTRATION CHARGES

The university charges the students centrally except for field course.

RECOMMENDED ALLOWANCES

For the following needs, allowances are recommended for each student in the Programme:

1. Books and special field, laboratory and cartographic equipment for each of levels 1, 2, 3, and 4 students.
2. Research Essay (Single Honours and Science Major only)
3. Fieldwork (Single and combined Honours, Science majors)

Parents are encouraged to give all assistance to their wards through the Bursary at registration.

Level Coordinators will provide, on request, supporting letters to relevant Scholarship Boards in respect of items 2 and 3 above.

SOCIETIES

Two Societies are prominent in the Department. These include:

1. **The National Association of Geography Students (NAGS), Bayero University, Kano**

The BUK Branch of the National Association of Geography Students (NAGS) is run entirely by students for the benefit of those in the University community who are interested in Geography. It has the full support of the Department and students reading Geography are encouraged to join its activities which include lectures, film shows, social gatherings and the publication of an annual magazine, The Dala Geographer. Watch the Notice board for the Association's announcements.

2. **Association of Nigerian Geographers (ANG)**

The Association of Nigerian Geographers (ANG) is a national professional organization of geographers, including university teachers, public sector employees, and educationists. The Association holds an Annual Conference and publishes the Nigerian Geographical Journal. Special reduced membership rates are available to students.

Contact: The Association of Nigerian Geographers
C/o Department of Geography University of Ibadan
Ibadan

TEACHING AND LEARNING

Course Contents and Regulations

Geography in Bayero University is offered in the Faculty of Earth and Environmental Sciences and Education (under both B.Sc and BSc Ed. combinations). From the Faculty, the Department offers courses at Single Honours. In addition to these, the Department makes available its courses to all other Departments in the University from where students take up courses at subsidiary levels.

This Handbook provides a guide to the course, regulations, special requirement, staff and other interests of the Department. It does not contain details of the Masters and Ph.D Programmes which are available separately.

CARTOGRAPHIC EQUIPMENT

All students offering courses GEO 1306, 2306, 3302 and 3303 are required to possess minimal set of drawing and cartographic equipment. Details will be announced at the beginning of each course. The cost of such equipment may exceed N10, 000 per student. Students will also be required to purchase inexpensive approved files for submission of work on GEO 3303.

DEGREE COURSES

1. Degrees Offered:

Geography may be studied in the Faculty Earth and Environmental Sciences as a subject for the degrees of B.Sc. (Single Honours) in conjunction with other subjects and in accordance with the Regulations of the Faculty.

Geography is also taught to students in the Faculty of Education as a main or subsidiary teaching subject.

The central philosophy of the B.Sc. Geography programme is derived from the principle that the discipline functions within the realm of man-land,

earth science, the area studies, spatial analysis traditions. The undergraduate programme is broad and it is aimed at pursuing the requirements of the National Development plans and man power needs. To this end, appropriate foundation for applicable specialization is laid through the four year programme.

Thus, the main objectives of the programme are to:

- i. develop understanding of human and natural environments through lectures, field and laboratory studies.
- ii. explore the character and processes of the local environment starting from the metropolitan area and the Kano region. Other parts of Nigeria and the neighboring West African countries are also explored with a view to appreciating the rich diversity in-terms of resources and development in the sub-region.
- iii. build the capacities of students through hands-on practical and apply the knowledge and skills acquired in interpreting environmental and development issues and the utilization of the natural resources without destroying the balance of the environment.

ADMISSION REQUIREMENTS

In addition to the University and Faculty minimum entry requirements, a Geography student in Level I must have:

- i. At least 5 credit passes including Geography, English and Mathematics in the GCE or NECO, WAEC O/L examinations or their equivalent;
- ii. Meet the cut-off point in UTME.
- iii. In addition to the University and Faculty minimum entry qualifications, a student wishing to enter directly into Level 200 must have:
 - a. A pass at C Grade or above in Geography in the GCE A/Level or IJMB
 - b. Equivalent qualifications acceptable to the faculty.

Program/Sub-Discipline/Discipline structure to include period of formal studies in the Universities, Industrial Training, Planned visit and projects.

A planned field visit is organized for all level 100 students for a minimum of one semester of 15 weeks (two hours per week). In addition, all level 300 students participate in a minimum of 7 hours field work exercise per day for a duration of one week in a designated geographic area outside the state at the end of first semester.

- c) Course Content Specifications/syllabus of all courses in the program/sub-Discipline.

(Below items are attached)

LIST OF COURSES IN THE DEPARTMENT

LEVEL 1

GEO 1201: Introductory Human Geography	2 Credits
GEO 1202: Geology and Landforms	2 Credits
GEO 1204: Geographical Regions of the World	2 Credits
GEO 1305: Map Analysis	3 Credits
GEO 1306: Elements of Land Survey	3 Credits
GEO 1207: Local Field Course	2 Credits
Also	
EES 1301 Algebra and Trigonometry	2 Credits
EES 1302 Vector and Geometry	2 Credits
GSP 1201 Use of English	2 Credits
GSP 2202 Use of Library, Study Skills and CITs	2 Credits
GEO 1211 Computer Appreciation	2 Credits

LEVEL 2

GEO 2201: The Kano Region	2 Credits
GEO 2202: Intro to Geomorphology	2 Credits
GEO 2203: Population Geography	2 Credits
GEO 2204: Spatial Organization of Societies	2 Credits
GEO 2306: Introductory Cartography and Statistical Mapping	3 Credits
GEO 2207 Intro to Soil Geography	2 Credits
	3 Credits
GEO 2207: Laboratory Project	2 Credits
GEO 2208: Introduction to Geographic Information System	2 Credits

Also

EES 2301 Introduction to Environmental Sciences	2 Credits
EES 2302 Statistics for Environmental Sciences	2 Credits
GSP 2202 Foundation of Nigerian Culture, Government and Economy	2 Credits
GSP 2205 Philosophy and Logics	2 Credits
GSP 2206 Peace Studies and Conflicts	2 Credits
GSP 2201 Use of English	2 Credits
GSP 2202 Use of Library Study Skill and CITs	2 Credits
GEO 2211 Computer Appreciation	2 Credits

LEVEL 3

Compulsory Courses to Single Honours Students

GEO 3301: Field Course	3 Credits
GEO 3302: GIS and Computer Cartography	3 Credits
GEO 3303: Principles of Remote Sensing	3 Credits
GEO 3204: Theory of Geography	2 Credits
GEO 3205: Research Methods	2 Credits
GEO 3212: Analytical Methods	2 Credits
GEO 3215: Social Geography	3 Credits

Electives

GEO 3206: Economic Geography	2 Credits
GEO 3207: population Geography	2 Credits
GEO 3208: Settlement Geography	2 Credits
GEO 3209: Geomorphology	2 Credits
GEO 3210: Climatology	2 Credits
GEO 3211: Biogeography	2 Credits
GEO 3213: Soil Survey & Classification	2 Credits
GEO 3214: Introduction to Geographical Hydrology	2 Credits
GEO 3216 Ecological Hazards	2 Credits
GEO 3218: Field and Laboratory Project	2 credits

LEVEL 4

Compulsory Course to Single Honors Students

GEO 4600: Dissertation	6 Credits
GEO 4301: Systematic Geography of Nigeria	3 Credits

GEO 4302: Geography of Developing World	3 Credits
GEO 4303: Geography of Developed World	3 Credits
GEO 4304: Image and Spatial Analysis	3 Credits
GEO 4305: Contemporary Philosophy and Methodology of Geography	3 Credits

Electives

Social Science Courses

GEO 4311: Agricultural Geography (PR GEO 3206)	3 Credits
GEO 4312: Population, Resource and Mobility (PR GEO 3208)	3 Credits
GEO 4313: Urban Geography (PR GEO 3208)	3 Credits
GEO 4314: Rural Geography (PR GEO 3208)	3 Credits
GEO 4315: Cultural Geography (PR GEO 3206, 3208)	3 Credits
GEO 4316: Transport Geography (PR GEO 3206, 3212)	3 Credits
GEO 4317: Industrial Geography (PR GEO 3206)	3 Credits

Environmental Science Courses

GEO 4321: Tropical Climatology (PR GEO 3210)	3 Credits
GEO 4322: Tropical Geomorphology (PR GEO 3209)	3 Credits
GEO 4323: Tropical Soils (PR GEO 3209)	3 Credits
GEO 4324: Biogeography (PR GEO 3211)	3 Credits
GEO 4325: System Approach to Geomorphology (PR GEO 3209, 3212)	3 Credits

Applied Science Courses

GEO 4318: Medical Geography (PR GEO 3208)	3 Credits
GEO 4319: Geography of Inequality and Development (PR GEO 3206, 3208)	3 Credits
GEO 4331: Element of Urban Planning (PR GEO 3208)	3 Credits
GEO 4332: Rural Land Resources Survey (PR GEO 3211 or 3313)	3 Credits
GEO 4335: Water Resources Evaluation (PR GEO 3210, 3214)	3 Credits
GEO 4336: Applied Plant Geography (PR GEO 3211)	3 Credits
GEO 4337: Agricultural Meteorology (PR GEO 3210, CR 4321)	3 Credits

Note: Not all courses are available for all sessions. The available ones will be made known at registration.

DEGREE STRUCTURE IN THE FACULTY OF EARTH AND ENVIRONMENTAL SCIENCES.

4.1 Level 1 (Minimum of 34 Credits or Maximum of 40 Credits)

- a. The Level 1 Programme for students intending to specialize in Geography consists of the 15 Credits available (i.e. GEO 1201, 1202, 1204, 1305, 1306, & 1307).
- b. In addition to these, students are to register for two Compulsory Faculty Courses (EES 1201 & 1202), and one Compulsory University course (GSP 1201).
- c. Finally, students are to register for a minimum of 13 Credits selected from two other Departments (both, or at least one, of the Departments must be from FEES).

4.2 Level 2 (Minimum of 32 Credits and Maximum of 38 Credits)

- a. Single Honours Students are to register for 16 Credits (i.e. GEO 2201, 2202, 2203, 2204, 2208, 2305 & 2306)
- b. In addition, students are to register for two University compulsory courses (GSP 2201 & 2203)
- c. Finally, students are to register for at least 14 additional credits selected from two other Departments (both, or at least one, of the Departments must be from FEES).

4.3 Level 3 (Minimum of 32 Credits and Maximum of 38 Credits):

- a. Single Honours Students are to register for 18 compulsory credits (i.e. GEO 3301, 3302, 3303, 3204, 3205, 3212 & 3315).
- b. They are to select any additional 14 credits from the available Elective courses (GEO 3206, 3207, 3208, 3209, 3210, 3211, 3313 & 3214).

4.4 Level 4 (Minimum of 32 Credits and Maximum of 38 Credits)

- a. Single Honours Students are to register for 18 compulsory credits (i.e. GEO 4600, 4301, 4302, 4303, 4304).
- b. Additionally students are to select a maximum of 6 credits each from Social Science and Environmental Science categories, and 3 credits from Applied Sciences.

Note: Students are to strictly consider the cases of Pre-requisite and Coquisite courses in their selections.

SUMMARY OF SINGLE HONOURS REGISTRATION REQUIREMENTS IN THE FEES

Level	Geog.	FEES	GSP	Dept 2	Dept 3	TOTAL
1	16	8	4	Minimum of 10		38
2	20	4	6	Minimum of 6		36
3	34	-	2	-	-	36
4	34	-	2	-	-	36
TOTAL	93	12	14	16		146

GEOGRAPHY AS TEACHING SUBJECT IN THE FACULTY OF EDUCATION

Note: The guidelines provided here are subject to the regulations of the Faculty of Education as it affects the main and subsidiary teaching subjects.

6.1 Level 1

- a. Students in Level 1 Programme for B.A. (Ed), B.LIS, Adult Education, Special Education and PHE are to register their 10 Credit requirements only from GEO 1201, 1202, 1204, 1305 and 1306. In addition to these, GEO 1207 may be made available only to B.Sc. (Ed) students.

6.2 Level 2

- a. Students in Level 2 Programme for B.Sc. (Ed), B.A. (Ed), B.LIS, Adult Education and Special Education are to register their 10 Credit requirements only from GEO 2201, 2202, 2203, 2204 and 2208. GEO 2207 may be made available only to B.Sc. (Ed) students.

6.3 Level 3

- a. The Level 3 Programme for both B.A. and B.Sc. (Ed) consists of 10 credits made up of compulsory GEO 3301 & 3303, and at least 4 credits from elective courses (GEO 3206, 3207, 3208, 3209, 3210, 3211, 3213, 3214 and 3218).
- b. Students from Library Science, Adult Education and Special Education Departments are strictly to register only from elective courses and according to the needs of their Departments.

6.4 Level 4

- a. The Programme for both B.A. (Ed) and B.Sc. (Ed) consists of two compulsory courses (GEO 4301 & 4302), making a total of 6 Credits. In addition to these, students are to register 9 more credits chosen from Social and Environmental Science courses,

such that at least one course comes from each of the two categories.

- b. Applied Science course are not available to these groups of students. However, B.Sc. (Ed) students may be allowed to take GEO 4303.

COURSE ASSESSMENT

Geography courses are assessed by examination and course work (field and laboratory reports, practical assignments, essay assignments or – when applicable – tutorial assignments). The weight given to course work as a percentage of the final marks for each degree course is as follows:

Level 1										EX/P	CA
GEO	1201	1202	1204							70	30
GEO	1305	1306	1207							100	
Level 2											
GEO	2201	2202	2203	2204	2208	2209	2210	2212		70	30
GEO	2305									50	50
GEO	2306	2207								100	
Level 3											
GEO	3306	3207	3208	3209	3210	3211	3214			30	
GEO	3212	3313								60	40
GEO	3205	3315								50	50
GEO	3301	3302								100	
Level 4											
GEO	4301	4302	4303	4311	4312	4313	4314	4315		70	30
GEO	4316	4317	4321	4322	4323	4324	4325			70	30
GEO	4331	4332	4334	4335	4336	4337	4338			60	40
GEO	4304									50	50
GEO	4600									100	

DESCRIPTION OF COURSES

Level 1

GEO 1201 Introductory Human Geography - 2 Credits

Human geographers are concerned with the “who”, “what”, “where”, “why”, “when”, and “how” of humans, their relationships and interrelationships with the environment. The course focuses on the spatial aspects of population growth and distribution, cultural differentiation, urban growth and decline, the spread of ideas and innovations, regional development and the location of economic activities as well as problems associated with these processes. This introductory course will expose students to several sub-fields of study including population, urban, economic, cultural, and political geography as well as some fundamental geographic concepts.

GEO 1202 Geology and Landforms - 2 Credits

The course introduces students to the evolution of the solar system and its structures. It provides geological background to landforms: internal structure and surface form of the earth, rock types (igneous, metamorphic and sedimentary); landform processes: mountain building, folding, faulting, volcanicity (intrusive and extrusive); denudation (physical and chemical weathering), fluvial and wind erosion and deposition, mass movement by soil creep, landslides and mudflow).

GEO 1204 Geographical Regions of the World 2 Credits

The course employs the regional approach to the study of different geographical regions of the world. The geography of each world region (e.g. Western-Europe, North America, South America and Oceania) is examined from the physical, human and economic aspects. In all cases the course gives attention to the implications of all the three for the development of the regions and their people. While attempting to discuss all, emphasis may shift depending on the decision of the department.

GEO 1305 Map Analysis - 3 Credits

Building on the elementary knowledge of map interpretation which is purely descriptive, the course first examines the language of maps. This is followed by measurements and quantification of geographical forms and processes as well as analyses and explanation of physical and cultural features on topographical maps. Analyses are drawn from concepts and models of forms and processes and making use of simple descriptive statistics in geography. The course equally introduces some analyses such as network analysis and drainage analysis. Practical forms the whole of the course.

GEO 1306 Elements of Land Survey - 3 Credits

This course introduces students to the basic concepts and techniques of surveys. The various survey types including land, geodetic, cartographic and topographic surveys; the general rules and principles of land surveys including chain survey, prismatic compass survey, plane table survey and measurement of height and slope and the use of GPS; the contemporary methods and equipment of land surveys will also be introduced. Field work forms most part of this course.

GEO 1207 Local Field Course - 2 Credits

This course consists of series of short visits to locations within and around Kano Metropolis to introduce students to important aspects of the physical and human geography of the area. Themes of visits will include: origin and morphology of the Kano city, typical savanna vegetation, geology and landforms, soils, climate and meteorological measurements; urban and rural interactions; industries and commerce; urban agriculture and services. Field visits form the whole of this course.

Level 2

GEO 2201: The Kano Region - 2 Credits

An introduction to the Kano region aiming at relating literature, lectures and field work, and to illustrate the concept of the region and physical environment: Weather and Climate, hydrology, soils and landforms as well as vegetation. Production, land use, population

distribution and growth, and settlement patterns in rural and urban areas; the historical evolution of the Kano Close-settled Zone and the nature of rural-urban relations; transportation, Industrialization, urban expansion and the predicament of agriculture are studied.

GEO 2202 Introduction to Geomorphology **2 Credits**

The course introduces students to the basic concepts in geomorphology; it serves as an introduction to landform studies. It deals with meaning and scope of geomorphology, introduction to landforms and description of slope. It introduces students to Earth movement and its associated landforms (Mountains, Plain, and Plateau); geomorphic materials and processes (sediment production by weathering, sediment transportation by gravity, water, wind, sea and glacier) sediments deposition and human as geomorphic agents. It also deals with processes of landform development i.e. exogenic (weathering and related landforms, fluvial, coastal, aeolian, glacial and karst) and endogenic (orogenic, earthquake and volcanicity).

GEO 2203 Population Geography - **2 Credits**

This course examines the dynamics of population and associated economic and social processes, the difference and interdependence between developed and developing worlds; demography, birth and death rates, sex ratio and age compositions. Population distribution and mobility; world population patterns; population and resources; the concept of optimum population, over population and under population; social and economic characteristics of populations; population problems, planning policies; demographic transition model, introduction to theory of population mobility are studied.

GEO 2204: Spatial Organization of Societies - **2 Credit**

The course describes how society organized its space by use of concepts and techniques of spatial analysis. Space, place and society are detailed in relation to organized social activities. Four traditions of geography man-land, Earth-Science, area- study and spatial traditions are covered together with locational attributes such as bearings, distance and position. Use of geographical scales i.e. local, regional and global scales are described. The concept and models of rural land use in conjunction

with urban land use are treated. Aspects of distance and spatial interactions leading to spatial diffusion of innovation and ideas are considered. Communication networks are analyzed by various techniques.

GEO 2306 Introductory Cartography and Statistical Mapping 3

Credits

The course examines the use of symbols in cartographic design, graphical and other techniques to represent geographical phenomena on maps: isopleths, choropleth and dot maps, line, polygraphs and pie charts; proportional circles, spheres and cubes; pictorial and other techniques such as interpolation. The suitability of different statistical techniques in the analysis of space and time, as they relate to climatic, relief, population, settlement and other geographic variables were also taught. Laboratory work forms the whole of this course.

GEO 2207 Soil Geography -

2 Credits

Scope of soil geography, soil as a natural body in space-time continuum; importance of soil, physical properties (soil texture, colour, bulk density, porosity and infiltration), chemical properties (CEC, pH, N, EC, P and K); biological properties (microbial biomass C, N, P, microbial population, enzymes and soil respiration); soil composition: organic materials, inorganic materials, water, air, soil forming factors: parent materials, living organism, climate, topography and time; spatial variability of soil, nature/scale of the variability, factors responsible for the soil variability; spatial distribution of soil types: ferruginous and ferrellitic soils, hydromorphic soil, reddish brown soil and regosol; soil problems (pollution, salinity and concretion) and their management strategies.

GEO 2208 Introduction to Geographical Information Systems -2

Credits

This course introduces students to the development of Geographic Information System (GIS) and the key concepts and principles relevant to it. Historical development of GIS; components of GIS; computer operations and computerization of geographical data; organizing data; nature, types, and structure of data; geospatial database concepts; file

types, database and structure; geospatial database management and manipulation are taught.

Level 3

GEO 3301 Field Course - 3 Credits

This course relates geographic theory to a field situation and systematic specializations to one another. It provides an intensive analysis of regional identity, and gives experience in the techniques of field observations and measurements. Intensive field studies will be carried out in 7 days at a suitable location in Nigeria during a feasible period in the session. The field studies will be preceded by introductory lectures and laboratory classes and supported by studies in literature relevant to the area. The course is examined solely by submitted Field Reports.

GEO 3302 GIS and Computer Cartography - 3 Credits

The course introduces the nature and use of cartographic equipments; principle of draughtsmanship; map construction, accuracy and error; scale selection, representation and change; principles and practice of map design; execution of symbols and lettering; maps as a form of communication. Project on an aspect of thematic mapping is also part of the course. Laboratory work forms the whole of this course.

GEO 3303 Principles of Remote Sensing - 3 Credits

This course introduces the theory and practice of remote sensing (air photography and satellite imagery). It examines the solar radiation and the principles of electromagnetic spectrum and radiation balance. Air photo and satellite data will be used. Similarly, students would be taught about remote sensing platforms, sensors, advantages and disadvantages of various sensors and platforms and the use and relevance of ground truthing/checking. Laboratory classes will form part of the course.

GEO 3204 Theory of Geography - 3 Credits

The course introduces students to the alternative theoretical approaches to geographical explanation and their historical antecedents. Some early attempts at geographical explanation; Non-Western views of the world are also examined. It studies Geography in relation to Natural History. Approaches to geographical explanation in use today: environmental

determinism as a basis for geographical explanation and the alternative possibilist school of thought; the concept of regional geography in the context of natural, cultural and physical regions; location theory in geography; model in geography, human and physical geography and the ecological perspective; geographical applications of general systems theory; quantification; social relevance and radical geography. The dynamic nature of geographical explanation and theory in terms of major schools of thought, including a review of Nigerian geography and the theoretical base of a geographical research.

GEO 3205 Research Methods - 2 Credits

This course introduces students to research procedure and data generating techniques necessary for geographical research. Formation of research proposal (design); literary research and other secondary data-gathering techniques; sampling techniques; primary data-gathering techniques such as land use surveys, enumeration, field and laboratory measurements and experiments. Practical work forms a part of this course.

GEO 3206 Economic Geography - 2 Credits

This course examines human economic activities within a spatial context. Throughout the course, examples will be drawn from both the developed and the developing worlds with emphasis on the latter, particularly Africa. Scope and content of economic geography, the resource base of economic activity, natural resources, human resources, capital and technological resources; transport structures and the role of transportation in production and distribution; the location of human activities (theory and practice): agricultural and industrial location; tertiary activities including provision of services and markets – daily and periodic as well as principles and patterns of international trade will be studied. Field work may form a part of this course.

GEO 3207 Population Geography

The course focuses on population and development nexus. It starts by reviewing the meaning and scope of population geography; historical and current trends of population, population patterns (global, national and urban scales) and the population processes (fertility, mortality, migration) that create them. The course will also look at relationships between population

and poverty; population and gender issues; national population declines, public health provision, the HIV/AIDS epidemic and population, natural disaster and conflict. Other important issues to be covered include population and urbanization; population displacement; population and international development program and policies (like SDGs). The course concludes by looking at population, urbanization and development case studies in some countries (Iran, Singapore, China and Rwanda, Brazil).

GEO 3208 Settlement Geography - 2 Credits

The course introduces students to the historical origins of human settlements and the emergence of ancient civilizations with particular reference to the Fertile Crescent and the Nile Valley. It compares and discusses the features of pre-industrial and industrial cities. It further examines the typology of settlements and factors influencing their locations. Central place theory is also examined in relation to its importance in explaining the hierarchy of settlements. Rural-urban relationships are also examined. Finally, course looks at the classification of African and Nigerian cities. Fieldwork forms part of this course.

GEO 3209 Geomorphology - 2 Credits

The course introduces students to the concepts, theories and explanations in geomorphology and some aspects of geomorphology needed in the teaching of landforms in Nigerian Universities. Concepts and theories of slope evolution, morpho-climatic geography and the geographical cycle in different regions are also introduced. Explanations are reviewed in their descriptive, genetic, morphometric, functional, probabilities, and systems analysis forms. Selected processes and resultant landforms: fluvial, Aeolian, glacial and marine actions are also studied. Major landforms in Africa; folded and faulted landforms, landforms on igneous and sedimentary structures are to be reviewed.

GEO 3210 Climatology - 2 Credits

The course is an introduction to elements of weather and climate and the factors that control their geographic distribution: particularly the role of insolation, latitude, altitude, ocean currents and large water bodies. Koppen's and Thornthwaite's climatic classifications are reviewed. The distribution and description of climatic types of the world, with emphasis

on tropics, form part of the course. The Meteorological Station of the department will be used to expose students to meteorological instrumentation and measurements.

GEO 3212 Analytical Methods - 2 Credits

This course introduces students to simple inferential statistics with emphasis on small samples. Review of measures of central tendency and dispersion are carried out. Parametric and non-parametric techniques; pairwise correlation and simple regression analyses; point and line system analyses are the key points of the course. Hypothesis and other testing: Chi-square; students t-test; one-and two-way analyses of variance. Practical work forms a part of this course.

GEO 3213 Soil Survey and Classification - 2 Credits

The course introduces students to the techniques of soil survey and soil classification. Techniques of soil survey in the field and laboratory as well as soil correlation and classification techniques are taught. Methods of describing soil types and patterns in relation to soil variations over space and time are reviewed. The skills involved in soil maps preparation and soil survey reports are examined. Soil types in relation to their current and potential uses are identified. Field and laboratory exercises form part of the course.

GEO 3214 Introduction to Geographical Hydrology - 2 Credits

The course introduces students to the basic concepts in surface and ground water hydrology, with particular reference to river basins. Water, its forms and availability, global hydrological cycle and the concept of balance are described. Moreover, this course examines flow dynamics on the surface, through and groundwater flow as well as their characteristics. Rivers and their basins; basin hydrological cycle and balance, stream responses to rainfall input; typical hydrographs and unit hydrographs are all taught. The course also identifies ways of sediment generation and sediment transport: types of sediment and mode of transport, floods and flood control, river regulation: types and their effects, groundwater hydrology: types of aquifer; factors of groundwater storage. Field course forms a part of this course.

GEO 3215 Social Geography

The course introduces students to geographical investigation of the links between spatial change and social processes. Selected topics will focus on the ways social relations, identities and inequalities are created and practiced over space, with examples from Nigeria and international contexts. This course presents students with the opportunity to critically assess the interrelationship between space and lifestyle. Focusing on the connections between people and their social environment, topics explored include gender and space, crime, social class, residential segregation, and concepts of community and neighbourhood. Other topics include City space (urban form and structure), Geography of deprivation and disadvantage, Poverty, Inequality, social exclusion and social justice. Field trips outside class time are required.

GEO 3217 Man and Environment

- 2 credits

Man and environment introduces students to the role of man in shaping the environment. Evolution and historical background of man's effects on 1 components of the environment such as lithosphere, atmosphere and hydrosphere are to be covered. The significance of Neolithic period on development of culture and other achievements of man are treated with emphasis on skill acquisition and development. Transformation of agricultural activities from shifting cultivation to commercial farming known as agricultural revolution receives attention. The subsequent industrial revolution leading to the change in society and economic development from Europe to Africa is also treated. Urban development due to increased population and its effects on food security, population and resources are covered. Human activities on planet earth and resultant consequences are considered. Environmental hazards such as hurricanes, flooding etc. are handled to explain man-environment relationship.

GEO3218: Field and Laboratory Project

- 2 credits

The course introduces students to soil, soil sampling which include equipment and sampling mechanisms (systematic, stratify, random and purposive). Type of soil sampling (composite, bench mark and core sampling), profile sampling and description, soil samples handling and preparation for laboratory analysis are taught. Office preparation (pre-field activities) for field work: preparation of base map, proposing the sampling

point based on grid, free traverse or combine methods are practically illustrated. It introduces students to the practical field methods such as field test (infiltration, drainage, texture, colour and infiltration capacity) and laboratory test and analysis of some soil properties: physical properties (particle size analysis, bulk density and AWHC), chemical properties (pH, electrical conductivity, CEC and organic matter, nutrient elements: macro (N, P, K, Ca and Mg) and micro (Bo, Fe, Mn, Pb & Cu) and biological properties (microbial population and diversity, soil respiration, microbial enzymes and soil animals). Field, laboratory, report writing and soil map production form part of the course.

Level 4

GEO 4600 Research Essay

- 6 Credits

An original essay of not more than 10,000 words on a topic to be approved by the Department is to be undertaken by each student under the supervision of a member of staff. The essay will be based on field research and will involve the formulation of the project, selection of method, collection and analysis of data, and presentation.

GEO 4301 Systematic Geography of Nigeria

-3 Credits

An examination of the geography of Nigeria at an advanced level, making full use of the literature and covering all major topics. The description and analysis of spatial patterns of climate, geology, relief, soils vegetation, economic resources, population and settlement, production and exchange: the distribution of primary, secondary and tertiary production; systems of production and systems of exchange; inter-urban, interregional, and international linkages. Types of geographic change: innovation, education, urbanization, industrialization, the growth of the oil economy, and development policies. Approaches to regionalization. Political and economic developments including ECOWAS: Nigeria's relationship with member countries, Africa and the world at large.

Geo 4302 Geography of Developing World

The course introduces students to issues of development through some theories. It examines various definitions of developing countries, the economic and geographical criteria for the classification of developing countries, characteristics and challenges of the developing countries. Finally, the course conducts a case study of three developing cities from Africa, Asia and Latin America.

GEO 4303 Geography of Developed World

This course is design in order to expose students to issues relating to developed parts of the world. The course is limited to regions such as Anglo America, Western Europe, Australia and New Zealand, East Asia such as China, Hong Kong and Japan, parts of former Russia and its developed CISs such as Ukraine and Crimea. The course will focus on economic and environmental issue and as well as the geopolitics of the regions. Population distribution, geographic factors affecting development, Environmental challenges and issues that hinders development and how they are overcome for development. Transport system, farming system, Population distribution and its characteristics as well as its impact on development of the regions. Mineral resources, energy resources and energy crises facing the developed world. Role of Information and Communication Technology (CIT) in changing the life style of the populace of the developed worlds as well as their industries and their geopolitics towards developing nations of the world.

GEO 4304 Image and Spatial Analyses - 3 Credits

The course introduces students to geoprocessing techniques on, particularly, remotely sensed data using GIS programs (such as IDRISI, and QGIS). Evaluation of remotely sensed data; preprocessing; analysis (quantification); Classification (evaluation). Data retrieval techniques. Analytical tools (Dbase Query, Map Algebra, Distance and Context Operators). Analytical operations (Dbase Query, Derivative Mapping, Process Modeling). Computer laboratory work forms an essential part of this course.

GEO 4305: Contemporary Philosophy and Methodology of Geography - 3 credits

The major aim of this course is to introduce students to the contemporary issues, methodologies and philosophies of geography. It will dwell more on recent burning issues in geography right from the early 1960s to date. The course will look at theories, models and system analysis in geography. The themes to be covered include the following; Modern themes in Geographical thought; Positivism, Pragmatism, Existentialism, Functionalism, Idealism, Realism, Marxism. Quantitative revolution and quantification in geography. Radical Geography. Women and environment; Feminism, social inclusion, social vulnerability, women right. Phenomenology and Humanistic Geography. Applied Geography. Modernism, Postmodernism. Modes of explanation in geography: Ecological/ Functional modes, Spatio-temporal mode, Morphometric mode, Cognitive description, System Approach. Classification in Geography and the future of geography.

GEO 4311 Agricultural Geography - 3 Credits

Agricultural origins and dispersal – the origin and diffusion of West African crops. Climate water resources and agriculture. Agricultural production systems, technology and change. Agricultural location theory; behavioral and probabilities models of agricultural activities; marketing systems. The concept of agricultural sector in the national and international economies; trade and aid. Transforming traditional agriculture; the contemporary dilemma of Nigerian agriculture.

GEO 4312 Population, Resource and Mobility - 3 Credits

The historical context of population growth in relation to resources: determinants of population change; neo-Malthusian and alternative theoretical frameworks. Population and resources at village scale: measuring the determinants of population change; agricultural, intensification and diversification in response to population growth; critical population density and related concepts; the impact of environmental variability on population. Population and resources at global scale; the green revolution and its impact; consumption of non-renewable resources; and attempts to model the world system.

Population mobility in response to perceived resources: classification, measurement, modeling and behavioral interpretation of mobility.

GEO 4313 Urban Geography - 3 Credits

Urban processes in the third world are structured by the nature of the economic transition towards industrialization, and the interdependent relations with developed world. This course examines the structure underlying urbanization processes, and the variety of urban forms and economies and societies produced by them in the contemporary third world. Origins and history of urbanism; modes of production, evolution and diffusion. Contemporary Third World urbanization; dependency and underdevelopment “over urbanization” spatial analysis of the city; morphology, ecology, daily activity. Urban economy; formal and informal circuits urban poverty, recession and retrenchment, class formation. Urban housing; private and public sectors such as squatter settlements and “Low Cost” housing. Field work forms a part of this course.

GEO 4314 Rural Geography - 3 Credits

Typology of village and settlement patterns; basic components of rural settlements and their location principles; settlement functions and settlement change. Planned and unplanned settlement frontier. Typology of rural economic systems; rural production and consumption; rural energy; central places and marketing. Characteristics of rural population and mobility. The nature of rural isolation and poverty; the dynamics of rural systems; planned strategies for rural development income, health education, amenities. Field work forms a part of this course.

GEO 4315: Cultural Geography - 3 Credits

Introducing culture; its forms and concepts as well as variations from place to place had giving rise to cultural geography. Themes such as cultural identity, diversity, and symbol are considered in this course. Cultural meanings and its variations are discussed. Concept of man culture and nature are given attention toward understanding culture and environment. Discourse on cultural place and cultural space

precede cultural landscapes (economic, religious and political landscapes). Effects of culture on development and resultant influences on globalization on culture are treated. Cultural turn, relativism and culture hearts are examined in relation to popular culture. Literature reading to analyze place, space and culture form part of the course. Qualitative research in culture study with key instruments like interviews, FGDs etc are introduced.

GEO 4316 Transport Geography - 3 Credits

This course examines transportation in countries at different stages of economic development and of different spatial structures. The world view is balanced with an in-depth consideration of transport management and planning, actual and potential, in Nigeria at both regional and urban scale. Historical development definitive concept and ideas; transportation system of the early civilizations, and transport interactions; transport networks, nodal accessibility, traffic assignment, transfer terminals and the daily reach. Traffic management and planning; traffic flow, friction (impedance), conflict and conflict resolution. Transport evaluation performance measure and forecasting methods such as the Gravity Model, Linear programming and Cost-Benefit Analysis. Field work forms a part of this course.

GEO 4317 Industrial Geography - 3 Credits

This course introduces the theories/models and practices of industrial location. It examines the issues of concentration and migration as well as the structure of manufacturing industries, using case studies from the developed and the developing countries. Industrialization in historical perspectives; models of industrial location. A review of industrial location and policy under capitalist and centrally-planned systems. Industrial structure, process and stage. The international distribution of industries, and industry in the national setting. Industrial inertia and migration. Structural characteristic of manufacturing industries and their relationship with patterns of industrial concentration. Typology of industrialization. Case studies of selected industries and industrial regions. Field work forms a part of this course.

GEO 4321 Tropical Climatology -

3 Credits

This course describes the weather and climatic conditions in the tropics: their spatial and temporal variations; and implications of these conditions for socio-economic activities in tropical Africa. Radiation and temperature conditions in the low latitude. Water and precipitation, General circulation in the tropics and its variations such as the Hadley cell, Trades and anti-trades, monsoon, jet streams etc. Tropical (Synoptic) disturbances (cyclones and anticyclones, easterly waves, shear and squall lines, dust haze (W. Africa). ITD, etc. Tropical climates (Asia, Africa, America and the oceans). Effects of tropical climate on energy production, agriculture, health, housing etc. Field work and Laboratory classes form parts of this course.

GEO 4322 Tropical Geomorphology

- 3 Credits

The course introduces students to the essential characteristics of the geomorphology of the tropics in the clearly defined morphogenetic regions: tropical humid, tropical dry-and-wet and tropical and subtropical arid. Coral formation is treated as a tropical phenomenon. The course consists of a series of lectures on the processes, and on the description and explanation of present landforms in each region and a set of laboratory and field investigations to determine the magnitudes of some landform attributes within the savanna regions. Laboratory classes form a part of this course.

GEO 4323 Tropical Soils -

3 Credits

Soil mineralogy: definition of a mineral, clay mineral. Structure and the weathering of the silicate clay. Iron exchange phenomenon – exchangeable and non exchangeable cation, cation exchange and base saturation ratio. The chemistry of selected elements like potassium, nitrogen, phosphorus, sulphur, boron, molybdenum. Soil classification with particular reference to West Africa. Physical and Chemical properties of tropical soils. Tropical soil survey methods and types of soil survey, uses of aerial photography in soil studies. Problems of soil survey for agricultural development in the tropics. The management of tropical soils for increased production – a case study of an area in

northern Nigeria. Field work and laboratory classes form parts of the course.

GEO 4324 Biogeography -

3 Credits

This course applies the basic concepts of Ecology to the study of the spatial aspects of Biogeography. The emphasis is upon the environmental factors affecting the present day distribution of plants and animals at various scales: global, continental (Africa), regional (West Africa) and national (Nigeria). In addition, specific studies of the spatial distribution of certain plants and animals will be emphasized e.g. fish, avifauna. The above spatial patterns will then be placed within a historical perspective emphasizing: Plate tectonics and plant and animal migration, climatic change the history of man's role within African physical environment and finally conservation priorities for Nigeria in the future.

GEO 4325 Systems Approach to Geomorphology

-3 Credits

A course which introduces students to the recognition and description of basic systems in geomorphology and tackles the concept of systems approach. The definition of systems: the importance of the approach to model building and analytical geography; systems in geomorphology, bearing in mind that separation is for clear understanding since systems are united wholes; the structure, state and description of selected systems, particularly morphological, cascading, and process-response systems.

GEO 4318 Medical Geography -

3 Credits

The course introduces students to the meaning, concepts and history of medical geography. It examines both disease ecology tradition as well as the healthcare traditions in Medical Geography. The course studies environmental determinants of diseases with particular reference to some infectious diseases including HIV/AIDS. The course also examines the factors of location and utilization of health care services with emphasis on the Nigerian scene. Aspects of reproductive health are also examined. Fieldwork forms part of this course.

GEO 4334 Geography of Inequality and Development - 3 Credits

The aim of this course is to understand how regions grow and develop through time and space. Thus, it involves the study of the processes and variables which account for the growth and economic development of urban and regional systems. Analysis of the spatial structure for a regional economy: the arrangement of nodes, productive resources, transport routes, and uses, institutions and markets. Analysis of regional and inter regional flows. Resources and regional growth; growth centers in regional development theories, politics of regional development; regional development as a process: organization of space, population and institutions for regional development. Case studies of regional development planning in developing and developed regions of the world. The course also involves evaluation of regional development strategies. An intensive field study of a small area of Kano State will form a part of the course.

GEO 4331 Element of Urban Planning - 3 Credits

The course examines the ways countries at different stages of economic development plan their cities. This world view is balanced by a consideration of urban planning in Nigeria. The course examines the meaning purpose and scope of urban planning. History of urban planning after industrial revolution in Europe and America is traced. After considering planning processes (theories, systems approach, rational model, disjointed incrementalism). In general, urban planning is then examined in developing countries with particular emphasis on Nigeria. In the context of Nigeria, the Pre colonial, colonial and post colonial towns are examined in the light of urban planning principles. Field work to understand local planning issues in Kano metropolis is part of the course.

GEO 4332 Rural Land Resources Survey - 3 Credits

This course introduces the principles and procedures of resource evaluation for rural land use planning. First the course covers the attributes of rural land resources and the place of land evaluation in rural development planning. Second, it examines the Principles of land Resources Evaluation including analysis, classification and mapping. The Land Resource Survey procedures including integrated (land

system) survey, land use survey, and land capability assessment. Fourth is Report pointing to its contents and scope. Mapping exercise and study of existing reports form part of the course. Field and laboratory work form a part of the course.

GEO 4335 Water Resources Evaluation - 3 Credits

The course deals with survey techniques and the assessment of ground and surface water resources. It also involves classification of water from these sources and for a variety of uses. It reviews the concept of hydrological cycle. It reviews detailed water survey techniques, surface water flow, storage and uses; ground water flow, storage and exploitation. It also focuses the management of ground water utilization, methods of determining water quality for general and specific uses; water quality standards; surface and ground water pollution, sources of pollutants, water pollution and environmental damage, recycling used water and sewage water as well as inter-basin transfers. The aspects of water politics and legislation, preservation and reclamation all form parts of the course. Practical exercises form a part of this course.

GEO 4336 Applied Plant Geography - 3 Credits

The course identifies the contribution of plants to sustainable development of developing countries. It reviews the concept of ecosystems with emphasis on plant-habitat interrelationships and introduces students to ethno-ecology; (the interaction between plants, people and the environment with particular emphasis on traditional and cultural uses as well as commercial uses of plants in industrialized societies. It covers field and laboratory methods of plant survey and sampling: Quadrant and transect sampling, collection, preservation, recording, mounting, storing and identification. The study of savanna trees and plants from auto ecological, and the origin and spatial spread stand point. Vegetation destruction and the maintenance of ecological stability. Field visits and project work form a part of this course.

GEO 4337 Agricultural Meteorology - 3 Credits

The course introduces students to meteorological parameters and the concept of crop requirements and limitations imposed by different meteorological conditions and sequences, with particular reference to the Kano Region. Meteorological conditions and sequences: meteorological elements, their magnitudes, duration of occurrence, temporal and spatial variations and their effects on crop performance. Limitations imposed by changing meteorological sequence on cropping patterns and oration. Crop tolerance to meteorological hazards and harsh conditions such as decreasing water table and increasing water deficiency, incidence of drought and floods. Technological answers to limiting meteorological parameters and their assessments: dams and irrigation, improvement in crop tolerance, conservational soil management. Field and Laboratory work form a part of this course.

ACADEMIC STAFF LIST AND PROFILE

S/N	NAME OF STAFF	RANK	QUALIFICATIONS	FIELD OF SPECIALIZATION
1	Salisu. Mohammed	HOD/Ass. Professor	B.Sc., M.Sc., PhD (BUK)	BioGeography and Dryland Biodiversity.
2	J. Afolabi Falola	Professor	B.Sc. (Ibadan), PhD (Ibadan), PgDRPP (ISS)	Rural Development, Agriculture, Innovation Diffusion, community-based resource management, Rural Area Analysis, Advanced Research Methods
3	Emmanuel Ajayi Olofin	Emeritus Professor	B.A. (Ife) 1967 M.A. (Malaya) 1973 Ph.D (ABU) 1981	Fluvial Geomorphology and Resource Evaluation
4	Adamu. I. Tanko	Professor	B.Sc., M.Sc., PhD (BUK), SSAN	Remote Sensing, Development, Water Resources Evaluation and Geomorphology
5	Yusuf. M. Adamu	Professor	B.Sc. (UDUS), M.Sc. (Ibadan), PhD (BUK); SSAN	Medical Geography, Geographies of Health, Social & Cultural Studies.
6	Maharazu A. Yusuf	Professor	B.Sc., M.Sc., PhD (BUK) Member, ANG	Soil Survey & Classification; Soil Fertility and Management; Soil Conservation; Small holder farming system.
7	Nuratu Mohammed	Assoc. Professor	B.Ed. M.Sc., PhD (BUK) Member, ANG	Development and rural Geography, Gender Studies
8	Adnan Abdulhamid	Assoc. Professor	B.Sc. (BUK); PGDE (FCE Kano), PhD (BUK)	Geomorphology, Land Resources Survey, Surface and Underground Water Resources, Climatology

9	Bello Gambo	Assoc. Professor	B.Sc., M.Sc., PhD (BUK)	Regional Geography, Rural Geography, Agriculture, Rural Economies
10	Ibrahim B. Lambu	Assoc. Professor	B.Sc., M.Sc., PhD (BUK), PGDE (FCE, Kano)	Cultural Geography, Population Geography
11	Lukka F. Buba	Senior Lecturer	B.Sc. (BUK), Cert. (Birmingham); M.Sc. (BUK), PhD	Climatology, Meteorology, Agricultural Meteorology, Climate Change, Analytical Methods
12	Saleh Bashayi Momale	Senior Lecturer	B.Sc., M.Sc., PhD (BUK)	Pastoralism, Land Resource Survey and Conflict Studies
13	Murtala M. Badamasi	Senior Lecturer	B.Sc. (BUK), M.Sc. (Unijos); PhD (UDUS);	GIS, Remote Sensing, Water Resource Management, Vegetation Analysis
14	Tasi'u R. Yalwa	Senior Lecturer	B.Sc. M.Sc. (BUK), Ph.D (ABU)	Fluvial geomorphology, Water Resources and Hydrology
15	Mairo Haruna	Senior Lecturer	B.Sc. Biology M.Sc., PhD (BUK)	GIS, BioGeography, Social Geography, Women in Agriculture
16	Ishaq A. Aliyu	Senior Lecturer	B.Sc. (BUK), M.Sc. (Ibadan), Ph.D (BUK)	Medical and Health Geography
17	Bawa Abdullahi Chafe	Senior Lecturer	B.Sc, MSc (BUK), Ph.D Univ. of Malaya)	Land Res. Dev. Housing Taxation
18	Mustapha Z. Karkarna	Senior Lecturer	B.Sc, MSc, Ph.D (BUK)	Forestry, BioGeography, Plant Geography and Biodiversity.
19	Mohammed Ahmed	Lecturer I	B.Sc., (BUK), M.Sc. RS & GIS (ABU), PhD (Inview): BUK	Soil Geography, Remote Sensing and GIS
20	Mansur A. Mohammed	Lecturer I	B.Sc., M.Sc.:BUK, PhD (NDA)	Soil Geography, Environmental Pollution

				and Applied climatology
21	Mahmud Abba	Lecturer II	B.Sc., M.Sc., PhD (Inview) BUK	Urban Geography, Regional Geography and Geography of tourism
22	Muhammad Nuraddeen Danjuma	Lecturer II	B.Sc., M.Sc., PhD (BUK)	Vegetation dynamics, forestry ecology and land degradation
23	Sadiq Mukhtar	Lecturer II	B.Sc.(BUK), M.Sc. (UK), PhD (UKM Malaysia)	Migration Studies and GIS
24	Murtala Uba Mohammed	Lecturer II	B.Sc., M.Sc. RS & GIS (ABU), PhD (Inview) BUK	GIS applications, Urban Geography and Quantitative Techniques
25	Sulaiman Yunus	Lecturer II	B.Sc. (BUK), M.Tech GIS (India), PhD (Inview) BUK	GIS and Remote sensing and urban Geography
26	Faiza Isa Sheshe	Lecturer II	B.Sc. (BUK), M.Sc., PhD (Inview) BUK	Medical Geography
27	Muzammil Ahmad Khalid	Lecturer II	B.Sc. (BUK), M.Sc. (India)	Climatology, Hydrology and Regional Geography, climatology
28	Musa Tanko Haruna	Lecturer II	B.Sc (BUK), M.Sc PhD (inview) BUK	Climatology and Agricultural Meteorology
29	Maikudi D. Lawan	Lecturer II	B.Sc., M.Sc. (BUK), MA (India) PhD (Inview) BUK	Transport Geography and Economic Geography

LIST OF ADMINISTRATIVE AND TECHNICAL STAFF

- | | |
|-----------------------------|-----------------------------------|
| 1. Ali Muhd Zikirullahi | Assistant Chief Technologist |
| 2. Abubakar Muhammad Hashim | Senior Technologist |
| 3. Abdulkadir Sani | Principal Technologist II |
| 4. Abdullahi Rabi'u | Cartographer I |
| 5. Salisu Musa | Higher Laboratory
Technologist |
| 6. Aminu Shehu Yakasai | Technologist II |
| 7. Umar Nuhu Saleh | Technologist I |
| 8. Bilyaminu Auwalu | Laboratory Assistant |
| 9. Ahmed Ibrahim Mohammed | Principal Executive Officer I |