

# KENYAN VARSITY COURSES THAT DIRECTLY REQUIRE PHYSICS AS A SUBJECT

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## a) GEOSPATIAL FAMILY

### *What do geospatial specialists do?*

A geospatial information scientist is someone who studies and analyzes how people utilize the physical space around them. They help to shape a city, state, country, and ultimately the world in which people live. He or she uses various computer software programs and tools such as geographic information systems, global positioning systems (GPS), and other remote aerial technology sensors to gather geographic information.

Geospatial information scientists may specialize in military, agricultural, mining, retail, urban planning and health care applications, among others. These specialists produce maps, tables, reports, and data layers using GIS technology.

Their work allows decisions to be made as to the best place to put a new school, daycare centre, hospital, or bridge. For example, they may study the spaces that exist between two cities, towns, neighbourhoods, or even streets. They measure and study how the usage of this space changes over time, which helps them determine how things like population, weather, climate conditions, and resources affected these changes.

### *Geospatial specialists may do some or all of the following:*

1. capture, process and analyse information such as survey data, aerial photography, and satellite imagery (remote sensing)

2. use surveying technology like Global Positioning Systems (GPS) to define accurate locations of features such as rivers, mountains or utility lines
3. use and/or develop specialist Geographic Information Systems (GIS) software to turn complex data into more user-friendly formats, like maps and 3D virtual plans/models
4. design data specifications (what data needs to be collected, how it should be collected, and how accurate it needs to be)
5. write and present reports on geospatial data analysis
6. convert paper maps into digital/electronic maps
7. Manage projects.

## Payment Scale

Geospatial scientist are among the best paid people around the world. In the developed world, they earn nothing less than of Ksh. 387 000 – Ksh 2 000 000 000 a month depending on the experience on the field. In Kenya, geospatial are among the top creed of scientist paid handsomely. Their scale ranges from Ksh. 150 000/month for diploma holders, Ksh. 180 000/month for degree holders up to Ksh. 500 000 for experienced workforce.

## Subject Requirements

1. **Subject 1:** MAT A - C+
2. **Subject 2:** PHY - C+
3. **Subject 3:** CHEM or BIO or GEO – C (PLAIN)
4. **Subject 4:** GROUP II or any GROUP III or any GROUP IV or any GROUP V

## Courses

1. Bachelor of Science (Geomatic & Geospatial Information Systems)
2. Bachelor of Science (Geospatial Information Science and Remote Sensing)

3. Bachelor of Science (Geospatial Information Science, With IT)
4. Bachelor of Technology (Geoinformation Technology)
5. Bachelor of Science (Geospatial Engineering)
6. Bachelor of Engineering (Geospatial Engineering)
7. Bachelor of Applied Science (Geo-informatics)
8. Bachelor of Science (Geomatic Engineering and Geospatial Information Systems)
9. Bachelor of Technology (Geospatial Engineering Technology)
10. Bachelor of Science (Geospatial Information Science)

### Universities that offer geospatial courses and cutoff points

CODE	UNIVERSITY	2013 COP	2014 COP	2015 COP	2016 COP
<b>BACHELOR OF SCIENCE (GEOSPATIAL ENGINEERING)</b>					
1112119	TECHNICAL UNIVERSITY OF KENYA	41.62	42.984	40.345	40.178
1263119	UNIVERSITY OF NAIROBI	43.04	43.632	43.896	41.312
<b>BACHELOR OF TECHNOLOGY (GEOINFORMATION TECHNOLOGY)</b>					
1112378	TECHNICAL UNIVERSITY OF KENYA	32.498	34.402	33.822	27.202
<b>BACHELOR OF APPLIED SCIENCE (GEO-INFORMATICS)</b>					
1112553	TECHNICAL UNIVERSITY OF KENYA	41.426	29.286	34.557	28.917
<b>BACHELOR OF SCIENCE IN GEOMATICS AND GEOSPATIAL INFORMATION SYSTEMS</b>					
1173619	DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY	38.591	40.673	40.398	35.471
1249619	JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY	43.387	43.7	41.26	40.284

<b>BACHELOR OF SCIENCE IN GEOSPATIAL INFORMATION SCIENCE</b>					
1249719	JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY	40.351	42.605	39.77	37.286
1173719	DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY	35.373	37.942	38.975	33.989
<b>BACHELOR OF TECHNOLOGY (GEOSPATIAL ENGINEERING TECHNOLOGY)</b>					
1229819	MASENO UNIVERSITY	37.749	40.561	35.866	31.126
1112819	TECHNICAL UNIVERSITY OF KENYA	38.612	39.088	38.627	34.68
<b>DIPLOMA</b>					
There is no known college offering Geospatial diploma courses in Kenya either, KNEC does not offer examinations of the same					

## Works Cited

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