Structure /Pattern of syllabus- F.Y.B.Sc

1. Title of the course –
   Gg- 110- Geomorphology (Paper I )

2. Preamble of the syllabus
   i. To introduce the students to the basic concepts in Geomorphology.
   ii. To acquaint the students with the utility and applications of Geomorphology in different areas and environment.
   iii. To make the students aware of the need of protection and conservation of different landforms.

3. Introduction: Pattern –Annual (20 marks internal & 80 marks University )

4. Eligibility- 12th pass Science

5. Examination-
   A. Pattern of examination-
      i. (Internal exam of 10 marks per term and University exam),
   ii. Pattern of question paper:
      Term end paper of 20 marks converted to 10 marks for each term
      Annual exam of 80 marks
   Internal Exam per term 10 Marks = Total 20 marks for two terms
   University Exam- 80 Marks
   B. Standard of passing- Internal -08- University -32= annual marks 40
   C. ATKT rules- No
   D. Award of class- F.Y.B.Sc. Pass
   E. External students- No
   F. Setting of question papers/ pattern of question paper
Internal Exam- 20 Marks = (converted to 20 marks) (1st & 2nd term)

Question 1: Multiple choice for 5 marks (5)
Question 2: True or false (5) for 5 marks
Question 3: Definitions (5) 5 marks
Question 4: Answers in two lines (2) for 5 marks

University Exam- 80 Marks =

Question 1. Answers in 20 words- 16 marks (8 out of 10)
Question 2. Answers in 50 words -16 marks (any 4 out of 6)
Question 3. Answers in 150 words- 16 marks (any 4 out of 6)
Question 4. Answers in 300 words- 16 marks (any 2 out of 4)
Question 5. Answers in 500 words- 16 marks (any 1 out of 2)

G. Verification / Revaluation- Yes

6. Structure of the course
   a. Compulsory paper- F.Y.B.Sc. General
   b. Optional paper- No
   c. Question paper and papers etc- One
   d. Medium of instructions- English

7. Equivalence of previous syllabus along with propose syllabus- yes

8. University terms: Annual pattern

9. Subject wise detail syllabus – As per attached sheets

10. Recommended books- Mentioned in syllabus

11. Qualification of teacher- M.A./M.Sc( Geography), as per UGC and University norms
## Equivalence of Syllabus in Geography (F.Y.B.Sc.) effective from June 2013

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<td>Techniques in Physical Geography (Paper III)</td>
<td>Gg-101</td>
<td>Techniques in Physical Geography (paper III)</td>
</tr>
</tbody>
</table>
Revised Syllabus (from June 2013)
F. Y. B. Sc. Geography
Course No. Gg. 110: Paper I
Title of the Course: Geomorphology

Objectives:
1. To introduce the students to the basic concepts in geomorphology.
2. To acquaint the students with the utility and applications of geomorphology in different areas and environment.
3. To make the students aware of the need of protection and conservation of different landforms.

<table>
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<table>
<thead>
<tr>
<th>SECTION II</th>
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<tbody>
<tr>
<td>5</td>
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<td>6</td>
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</tbody>
</table>
Geomorphic Agents & Its threefold work- I

- **River**: Mechanism of river erosion, erosional and depositional landforms. Davisian cycle of erosion.
- **Sea waves**: Mechanism of sea wave erosion, breaking of waves, swash, backwash, erosional and depositional landforms.

| 7 | 06 |

Geomorphic Agents & Its threefold work- II

- **Wind**: Mechanism of wind erosion, erosional and depositional landforms.
- **Glaciers**: Mechanism of glacial erosion, erosional and depositional landforms of valley and mountain glaciers.

| 8 | 06 |

**Reference books:**
Christopher son, R.W. 2000, Geo-systems, Prentice Hall, INC. USA.
Structure /Pattern of syllabus- F.Y.B.Sc

1. Title of the course –
   **Gg- 120- Climatology and Oceanography (Paper II)**

2. **Preamble of the syllabus**
   i. To introduce the students to the basic principles and concepts in climatology and oceanography.
   ii. To acquaint the students with the applications of climatology and oceanography in different areas and environment.
   iii. To make the students aware of the planet earth and thereby and enrich the student’s life

3. Introduction: Pattern – Annual(20 marks internal & 80 marks University )

4. Eligibility- 12th pass Science

5. Examination-
   A. Pattern of examination-
      i. (Internal exam of 10 marks per term and University exam),
   ii. **Pattern of question paper:**
      Term end paper of 20 marks converted to 10 marks for each term
      Annual exam of 80 marks

Internal Exam per term 10 Marks = Total 20 marks for two terms

University Exam - 80 Marks
   B. Standard of passing- Internal -08- University -32= annual marks 40
   C. ATKT rules- No
   D. Award of class- F.Y.B.Sc. Pass
   E. External students- No
   F. Setting of question papers/ pattern of question paper
Internal Exam- 20 Marks = (converted to 20 marks) (1st & 2nd term)
   Question 1: Multiple choice for 5 marks (5)
   Question 2: True or false (5) for 5 marks
   Question 3: Definitions (5) 5 marks
   Question 4: Answers in two lines (2) for 5 marks

University Exam- 80 Marks =
   Question 1. Answers in 20 words- 16 marks (8 out of 10)
   Question 2. Answers in 50 words -16 marks (any 4 out of 6)
   Question 3. Answers in 150 words- 16 marks (any 4 out of 6)
   Question 4. Answers in 300 words- 16 marks (any 2 out of 4)
   Question 5. Answers in 500 words- 16 marks (any 1 out of 2)

G. Verification / Revaluation- Yes

6. Structure of the course
   a. Compulsory paper- F.Y.B.Sc. General
   b. Optional paper- No
   c. Question paper and papers etc- One
   d. Medium of instructions- English

7. Equivalence of previous syllabus along with propose syllabus- yes

8. University terms: Annual pattern

9. Subject wise detail syllabus – As per attached sheets

10. Recommended books- Mentioned in syllabus

11. Qualification of teacher- M.A./M.Sc (Geography), as per UGC and University norms
# Equivalence of Syllabus in Geography (F.Y.B.Sc.) effective from June 2013

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<tr>
<td>Gg-101 Techniques in Physical Geography (Paper III)</td>
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</tbody>
</table>
F. Y. B. Sc. (Geography)
Course No. Gg. 120: Paper II
Title of the Course: Climatology and Oceanography

Objectives:
1. To introduce the students to the basic principles and concepts in Climatology and Oceanography.
2. To acquaint the students with the applications of Climatology and Oceanography in different areas and environment.
3. To make the students aware of the Planet Earth and thereby to enrich the student’s life.

<table>
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<th>Sub Unit</th>
<th>No. of periods</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Climatology</td>
<td>a. Definition, nature and scope</td>
<td>08</td>
</tr>
<tr>
<td></td>
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<td>b. Importance of Climatology in modern times.</td>
<td>08</td>
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<td>c. Weather and climate, elements of weather and climate</td>
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<td>d. Composition and structure of the atmosphere</td>
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<td></td>
<td>e. Hydrological cycle</td>
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<td>2</td>
<td>Insolation</td>
<td>a. Heat budget of the Earth.</td>
<td>08</td>
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<td>b. Factors affecting horizontal distribution of temperature.</td>
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<td>c. Vertical distribution of temperature – Inversion of temperature,</td>
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<td></td>
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<td>lapse rate and its types</td>
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<td>d. Global warming</td>
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<tr>
<td>3</td>
<td>Atmospheric Pressure and Wind System</td>
<td>a. Vertical and horizontal distribution of pressure.</td>
<td>11</td>
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<td>b. Formation of pressure system belts and their relation with winds.</td>
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<td>c. Concept of pressure gradient.</td>
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<td>d. Type of winds- planetary wind, periodic winds (monsoon winds),</td>
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<td>local winds (land and sea breezes, mountain and valley winds).</td>
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<td></td>
<td>e. Introduction to El Niño and La Niña</td>
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<tr>
<td>4</td>
<td>Atmospheric Moisture and Precipitation</td>
<td>a. Forms of precipitation- rain, snow, dew, hail and fog.</td>
<td>05</td>
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<td></td>
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<td>b. Types of clouds</td>
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<tr>
<td>Section II - Oceanography</td>
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</tbody>
</table>
| 5 Oceanography and Submarine Relief | a. Definition, nature and scope.  
  b. Importance of the study of oceanography in modern times.  
  c. General idea of ocean relief.  
  d. Relief of Atlantic, Pacific and Indian oceans. |
| 6 Types of Coasts | a. Types- Half Nehrung, Fjord, Dalmatian, Ria coasts.  
  b. Submerged and emerged coast. |
  b. Salinity- meaning and causes.  
  c. Salinity of oceans, seas, and lakes with examples. |
  b. Ocean currents- meaning, causes, types.  
  c. Ocean currents of Atlantic, Pacific and Indian Oceans  
  d. Effects of ocean currents.  
  e. Tides- meaning, causes, types.  
  f. Equilibrium theory of tides. |

**Reference books:**
- Grald, S., General Oceanography.
- Trewartha, G., Introduction to Weather and Climate.
- King, C.A.M., Oceanography for Geographers.
- Lake, P., Physical Geography.
- Pirie, R.G., Oceanography (Contemporary).
- Sharma, R.C. and Vatel, M., Oceanography for Geographers.
- Strahler, A.N., 1965. Introduction to Physical Geography, John Wiley and Sons, INC.
- Various websites of internet.
Structure /Pattern of Syllabus- F.Y.B.Sc.

1. Title of the course –
   **Gg- 101- Techniques in Physical Geography - (Paper III)**

2. **Preamble of the syllabus**
   i. To acquire the knowledge various techniques in physical geography
   ii. To enable the students to use techniques of specific maps and their geographical interpretation.
   iii. To acquaint the students with the weather instruments and their utility and applications in geographical phenomena
   • Batches of 15 students, each and 4 periods per batch

3. Introduction: Pattern –Annual (20 marks internal & 80 marks University )

4. Eligibility- 12th pass Science

5. Examination-
   A. Pattern of examination-
      i (Internal term end and University exam),
      ii. **Pattern of question paper:**
         Internal Exam: 20 marks
         External Exam: 80 marks
         Both the exams should be conducted at the end of second term.

   Internal Exam: 20 Marks
   University Exam: 80 Marks
   B. Standard of passing- Internal -08- University -32= annual marks 40
   C. ATKT rules- No
   D. Award of class- F.Y.B.Sc. Pass
   E. External students- No
   F. Setting of question papers/ pattern of question paper
G. Pattern of question paper:
   Term end paper of 20 marks converted to 10 marks for each term
   Annual exam of 80 marks
   Internal Exam per term 10 Marks = Total 20 marks for two terms
   University Exam- 80 Marks
   Internal Exam- 20 Marks = (converted to 20 marks)
   University Exam- 80 Marks =
   (According to the Skelton of the syllabus)

H. Verification / Revaluation- No

6. Structure of the course
   a. Compulsory paper- **F.Y.B.Sc. Practical**
   b. Optional paper- No
   c. Question paper and papers etc: YES
   d. Medium of instructions- English

7. Equivalence of previous syllabus along with propose syllabus- yes

8. University terms: **Annual pattern**

9. Subject wise detail syllabus – **As per attached sheets**

10. Recommended books- **Mentioned in syllabus**

11. Qualification of teacher- **M.A./M.Sc( Geography), as per UGC and University norms**
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**Objectives:**
1. To acquire the knowledge of various techniques in Physical Geography.
2. To enable the student to use techniques of specific maps and their geographical interpretation.
3. To acquaint the students with the weather instruments and their utility and applications in geographical phenomena.

* Batch of 15 students each & 4 periods per batch

### Section I -

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<td>Maps</td>
<td>a. Definition, elements of map, scale, direction, projection, Conventional signs and symbols.</td>
<td>08</td>
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</table>
| 2        | Map Scales  | a. Definition and types- Verbal Scale (VS), Representative Fraction (RF), Graphical Scale  
b. Conversion of scale- VS into RF and RF into VS (Minimum 4 examples each) 
c. Exercise on simple graphical scale (Minimum 4 exercises) | 08            |
| 3        | Relief      | I. Methods of relief representation.  
a. Qualitative- Hachures, hill shading, layer tint  
b. Quantitative- contours, form lines, spot height, bench mark, triangulation station  
c. Representation of following features by contours- uniform slope, concave slope, convex slope, terraced slope, conical hill, plateau, ridge, saddle, V-shaped valley, U-shaped valley, waterfall, gorge, spur, cliff. | 08            |
| 4        | SOI Toposheets | a. Introduction to toposheets, Types of Toposheet/Indexing of toposheets  
i 1: 1000000 Series Sheet  
ii 1:250000 Series Sheet  
iii 1: 100000 Series Sheet  
iv 1:50000 Series Sheet  
v 1:25000 Series Sheet  
b. Marginal Information, Grid Reference, Conventional Sings and Symbols | 08            |
| 5        | Profile     | a. Cross profile, longitudinal profile, intervisibility. | 05            |
| 6 | Toposheet Reading | a. At least one from the following regions- mountain plateau, plain.  
b. One day field excursion for orientation of Toposheet, observation of landforms, identification of landforms and preparation of brief report. | 08 |
| 7 | Weather Maps | a. Introduction to weather maps.  
b. India Meteorological Department (IMD) weather symbols.  
c. Use of satellite images in weather forecasting. | 08 |
| 8 | Isobaric Patterns | a. Drawing of isobaric patterns and associated weather- cyclone, anticyclone, ridge, trough, wedge, secondary depression, col. | 08 |
| 9 | Weather Instruments | a. Measurement of temperature  
   i. Simple thermometer  
   ii. Maximum and minimum thermometer  
   iii. Thermograph (Mechanism and functioning)  
b. Measurement of humidity  
   i. Hygrometer  
   ii. Hygrograph (Mechanism and functioning)  
c. Measurement of precipitation  
   i. Rain gauge (Mechanism and functioning)  
d. Measurement of air pressure  
   i. Aneroid barometer  
   ii. Barograph | 12 |
| 10 | Weather Map Reading | a. Reading of weather map of three seasons  
   i. Summer  
   ii. Monsoon  
   iii. winter  
   (Satellite images indicating weather phenomena should be shown). | 12 |
| 11 | Compilation of Information | a. Information should be compiled regarding weather forecasting.  
b. Compilation of weather information and its presentation (Should be compiled from daily news papers, television, internet, etc. and preparation of brief report).  
c. One day visit to nearby weather station | 05 |

* The student will maintain a journal for all the practicals and it will certified by concern teacher and Head.
Reference books:

- Various websites of internet.