

BCB744 Biostatistics Exam – Assessment Template

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2025-05-31

Student Information

- **Student Name:** _____
- **Student ID:** _____

I. Task-by-Task Assessment & Scoring

Task 1: Initial Processing (Weight: 10%)

Components:

- **1.1: Reading NetCDF**
- **1.2: Restructuring Data**

Scoring Scheme (per component):

- Correct output shown: **assign 100**
- Penalty: Incorrect variable naming (max -30): _____
- Penalty: Poor presentation or formatting (max -20): _____

Task Summary:

- **Average Task 1 Raw Score (0–100):** _____
- **Task 1 Weighted Score (/10):** _____
- **Final Task 1 Score ($\times 0.10$):** _____

Narrative Feedback (Task 1):

Task 2: Exploratory Data Analysis (Weight: 10%)

Component 2.1: Weighted Mean Time Series (Two Parts)

- (1) Correct summary plot for weighted mean time series: **assign 35**
 - Penalty: Missing year \times quarter aggregation (max -10): _____
 - Penalty: No exclusion of passes = 0 or area = NA (max -10): _____
 - Plot correctness: **assign 15**
 - Penalty: Poor formatting (max -10): _____
- (2) Correct pixel-level temporal analysis: **assign 35**
 - Penalty: Fewer than 100 samples (max -10): _____
 - Penalty: Missing year \times quarter \times pixel structure (max -10): _____
 - Plot correctness: **assign 15**
 - Penalty: Poor formatting (max -10): _____

Component 2.1 Score (0–100): _____

Component 2.2: Summary Statistics & Visualisations

- (1) Statistical summaries: **assign 50**
 - Penalty: Incorrect grouping (max -15): _____
 - Interpretation quality: (max 20): _____
- (2) Plotting: **assign 30**
 - Penalty: Poor formatting (max -20): _____

Component 2.2 Score (0–100): _____

Component 2.3: Observation Density Map

- Plot correctness: **assign 100**
 - Penalty: Poor formatting (max -50): _____

Component 2.3 Score (0–100): _____

Task Summary:

- **Average Task 2 Raw Score (0–100):** _____

• **Task 2 Weighted Score (/10):** _____

• **Final Task 2 Score ($\times 0.10$):** _____

Narrative Feedback (Task 2):

Task 3: Inferential Statistics – Part I (Weight: 20%)

Components:

• **3.1: Hypothesis Structure:** Raw Score: _____

• **3.2: Model Choice & Implementation:** Raw Score: _____
– *Penalty: Overcomplication not justified (e.g., unmotivated LMMs):* _____

• **3.3: Justification & Assumptions:** Raw Score: _____

• **3.4: Interpretation & Presentation:** Raw Score: _____
– *Penalty: Poor writing or code/text blending:* _____

Task Summary:

• **Average Task 3 Raw Score (0–100):** _____

• **Final Task 3 Score ($\times 0.20$):** _____

Narrative Feedback (Task 3):

Task 4: Assigning Kelp Observations (Weight: 20%)

Components:

• **4.1: Coastal Sections Assignment** (70% of Task 4): Raw Score: _____

• **4.2: Biogeographical Provinces Assignment** (30%): Raw Score: _____

Weighted Average Task 4 Score:

• $(4.1 \times 0.70 + 4.2 \times 0.30)$: _____

Final Task 4 Score ($\times 0.20$): _____

Narrative Feedback (Task 4):

Task 5: Inferential Statistics – Part II (Weight: 30%)

Components:

- **5.1: Section-wise Differences:** Raw Score: _____
 - Bonus: TukeyHSD (+5): _____
 - Penalty: Overcomplicated method (e.g., unmotivated LMM): _____
- **5.2: Province-wise Differences:** Raw Score: _____
 - Bonus: TukeyHSD (+5): _____
 - Penalty: Overcomplicated method: _____
- **5.3: Interaction (Section × Province):** Raw Score: _____
 - Penalty: Overcomplicated method: _____
- **5.4: Temporal Trend by Province:** Raw Score: _____
 - Penalty: Overcomplicated method: _____
- **5.5: Seasonal Variability across Provinces:** Raw Score: _____
 - Penalty: Overcomplicated method: _____

Task Summary:

- **Average Task 5 Raw Score (0–100):** _____
- **Final Task 5 Score (× 0.30):** _____

Narrative Feedback (Task 5):

Task 6: Final Write-up (Weight: 10%)

Scoring Scheme:

- **Clarity & Communication** (report organisation, flow, language): _____ /70
- **Critical Thinking** (limitations, implications, insight): _____ /30
- **Penalty:** AI-generated text (-50%) or similar issues: _____

Total Task 6 Score (after deductions): _____

Final Task 6 Score (× 0.10): _____

Narrative Feedback (Task 6):

II. Final Mark Calculation

| Task | Weighted Score |
|-----------------|----------------|
| Task 1 | _____ / 10 |
| Task 2 | _____ / 10 |
| Task 3 | _____ / 20 |
| Task 4 | _____ / 20 |
| Task 5 | _____ / 30 |
| Task 6 | _____ / 10 |
| Subtotal | _____ / 100 |

Global Penalties

- **Formatting / Document Structure (-0 to -15%):** _____
– Reason: _____
- **Excess Output (-0 to -15%):** _____
– Reason: _____

Total Global Penalty (%): _____ (max 40%)

Final Exam Mark: _____ %

> Calculation: Subtotal \times (1 - Penalty % / 100)

III. Assessor Summary & Recommendations

- **Strengths:**

- **Weaknesses:**

- **Recommendations for Improvement:**
