

# Final Assignment: Scoring Rubric

## Criterion 1: Introduction (10%)

Level	Score	Description
Insufficient	3	Clinical context is missing or irrelevant; research questions are unclear or not stated.
Sufficient	6	Clinical context is briefly described; research questions are stated but may lack clarity.
Good	8	Clinical context is well described; research questions are clearly stated and appropriate.
Excellent	10	Clinical context is compellingly presented with clear motivation; research questions are precisely formulated and well-justified.

## Criterion 2: Exploratory Data Analysis (20%)

Level	Score	Description
Insufficient	3	EDA is missing or superficial; no spaghetti plots or inappropriate visualizations.
Sufficient	6	Basic EDA present for both outcomes; spaghetti plots included but may lack clarity.
Good	8	Comprehensive EDA with clear spaghetti plots for both outcomes; patterns by rehab program explored.

Level	Score	Description
Excellent	10	Excellent EDA with insightful visualizations for both outcomes; clear presentation of trajectory patterns; thoughtful summary of observed patterns informing subsequent analysis.

### **Criterion 3: Unconditional Growth Models (30%)**

Level	Score	Description
Insufficient	3	Models are incorrectly specified or missing for one or both outcomes; no interpretation of variance components or ICC.
Sufficient	6	Models correctly specified for both outcomes; fixed and random effects reported but interpretation may be incomplete; ICC calculated but interpretation unclear.
Good	8	Models correctly specified with random intercepts and slopes for both outcomes; variance components and ICC correctly interpreted; model assumptions checked.
Excellent	10	Models correctly specified for both outcomes with clear justification; thorough interpretation of fixed effects, variance components, and ICC; comprehensive assumption checking with appropriate diagnostics.

### **Criterion 4: Conditional Growth Models (30%)**

Level	Score	Description
Insufficient	3	Models are incorrectly specified; rehab $\times$ time interactions missing or misunderstood; analysis incomplete for one or both outcomes.

Level	Score	Description
Sufficient	6	Models include rehab program for both outcomes; time interactions attempted but may be incomplete; basic interpretation present.
Good	8	Models correctly include rehab program × time interaction for both outcomes; appropriate model comparison; coefficients correctly interpreted.
Excellent	10	Systematic model building for both outcomes with clear rationale; rehab × time interactions correctly specified and tested; thorough interpretation with clinical meaning for the subpopulation.

#### **Criterion 5: Discussion and Conclusions (10%)**

Level	Score	Description
Insufficient	3	Discussion is missing or does not address research questions; no limitations mentioned.
Sufficient	6	Key findings summarized; some clinical interpretation; limitations briefly mentioned.
Good	8	Findings clearly linked to each research question; meaningful clinical interpretation; thoughtful discussion of limitations.
Excellent	10	Insightful synthesis of findings addressing all research questions; compelling clinical interpretation with practical implications; comprehensive discussion of limitations and their impact on conclusions.

#### **Grade Calculation**

Criterion	Weight	Score	Weighted Score
Introduction	10%	_____	_____
Exploratory Data Analysis	20%	_____	_____

Criterion	Weight	Score	Weighted Score
Unconditional Growth Models	30%	_____	_____
Conditional Growth Models	30%	_____	_____
Discussion and Conclusions	10%	_____	_____
<b>Final Grade</b>	<b>100%</b>		<b>** _____ **</b>

### Example Calculation

Criterion	Weight	Score	Weighted Score
Introduction	10%	8	0.8
Exploratory Data Analysis	20%	8	1.6
Unconditional Growth Models	30%	6	1.8
Conditional Growth Models	30%	8	2.4
Discussion and Conclusions	10%	6	0.6
<b>Final Grade</b>	<b>100%</b>		<b>7.2</b>