



**Summer Intensive Workshop**  
**Biostatistics**  
**Nawar Shara & Soleman Abu-Bader**  
**July 15-19, 2024**  
**Time: 10:00AM - 3:00PM EST**

**TEXTBOOK**

Abu-Bader, S. H. (2021). *Using statistical methods in social science research*, (3<sup>rd</sup> ed.). Oxford University Press. (<https://bit.ly/2JOxuCc>).

eBook: <https://redshelf.com/book/1709283/using-statistical-methods-in-social-science-research-1709283-9780197522455-soleman-h-abu-bader>

Topic and Content	Time
<b>Monday – Nawar Shara</b>	
<ul style="list-style-type: none"> <li>➤ Introduction to Biostatistics</li> <li>➤ Descriptive Statistics</li> <li>➤ Hypothesis Testing</li> <li>➤ Data Sources and Data Captures (Qualtrics, REDCap.</li> <li>➤ Readings: Abu-Bader, Chapters 1-6</li> </ul>	10:00AM-3:00PM <b>(Break 12:00-1:00PM)</b>
<b>Tuesday – Soleman Abu-Bader</b>	
<ul style="list-style-type: none"> <li>➤ Working with SPSS (Download SPSS free trial here: <a href="#">SPSS trials   IBM</a>)</li> <li>➤ Correlation &amp; Regression Analysis               <ul style="list-style-type: none"> <li>○ Pearson’s Correlation Coefficient</li> <li>○ Partial Correlation</li> <li>○ Simple Regression Analysis</li> </ul> </li> <li>➤ Readings: Abu-Bader, Chapters 7 &amp; 12</li> </ul>	10:00AM-3:00PM <b>(Break 12:00-1:00PM)</b>
<b>Wednesday – Soleman Abu-Bader</b>	
<ul style="list-style-type: none"> <li>➤ Group Comparisons               <ul style="list-style-type: none"> <li>○ Independent t-Test</li> <li>○ One-Way ANOVA &amp; ANCOVA</li> </ul> </li> <li>➤ Readings: Abu-Bader, Chapters 9 &amp; 10</li> </ul>	10:00AM-3:00PM <b>(Break 12:00-1:00PM)</b>
<b>Thursday – Soleman Abu-Bader &amp; Nawar Shara</b>	
<ul style="list-style-type: none"> <li>➤ MORNING: Sample Size &amp; Power Analysis (Download G*Power here: <a href="#">Universität Düsseldorf: G*Power (hhu.de)</a>)</li> <li>➤ Intro to BIG Data Mining, Including EHR</li> </ul>	10:00AM-3:00PM <b>(Break 12:00-1:00PM)</b>
<b>Friday – Nawar Shara</b>	
<ul style="list-style-type: none"> <li>➤ Artificial Intelligence and the future of clinical and Translational Research</li> </ul>	10:00AM-3:00PM <b>(Break 12:00-1:00PM)</b>