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|  |  |
| --- | --- |
| **Project** | |
| Department | Basic Sciences |
| Course Code | STAT 105 / Science Track |
| Course Title | Statistics |
| Semester | Third Term 2022-2023 |
| Instructor |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Student Name | ID | Group |
| 1 |  |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |

1. The used sampling method is Simple random sampling.
2. The organizing data
3. Categorical frequency distribution for **Blood Group, Gender, admit year** and **College**.

**Blood Group** **Gender**

|  |  |  |
| --- | --- | --- |
| ***Blood Type*** |  |  |
|  | *frequency* | *percent* |
| A | 30 | 30.0 |
| B | 56 | 56.0 |
| O | 14 | 14.0 |
|  | 100 | 100.0 |

|  |  |  |
| --- | --- | --- |
| ***Sex*** |  |  |
|  | *frequency* | *percent* |
| M | 74 | 74.0 |
| F | 26 | 26.0 |
|  | 100 | 100.0 |

**Admit year College**.

|  |  |  |
| --- | --- | --- |
| ***College*** |  |  |
|  | *frequency* | *percent* |
| ARCH | 41 | 41.0 |
| MD | 19 | 19.0 |
| ENGG | 16 | 16.0 |
| COMSC | 12 | 12.0 |
| DENT | 10 | 10.0 |
| EDUDM | 1 | 1.0 |
| NURS | 1 | 1.0 |
|  | 100 | 100.0 |

|  |  |  |  |
| --- | --- | --- | --- |
| ***Admit Year*** |  |  |  |
|  | *frequency* | *percent* |  |
| 2009 | 1 | 1.0 |  |
| 2010 | 38 | 37.6 |  |
| 2011 | 0 | 0.0 |  |
| 2012 | 22 | 21.8 |  |
| 2013 | 32 | 31.7 |  |
| 2014 | 8 | 7.9 |  |
|  | 101 | 100.0 |  |

1. Grouped frequency distribution for **GPA1, GPA2,Weight and Height.**

**GPA1**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |
|  | ***GPA1*** |  |  |  |  |  | *cumulative* | |
| *lower* |  | *upper* | *midpoint* | *width* | *frequency* | *percent* | *frequency* | *percent* |
| 1.6650 | < | 2.1650 | 1.9150 | 0.5000 | 13 | 13.0 | 13 | 13.0 |
| 2.1650 | < | 2.6650 | 2.4150 | 0.5000 | 8 | 8.0 | 21 | 21.0 |
| 2.6650 | < | 3.1650 | 2.9150 | 0.5000 | 13 | 13.0 | 34 | 34.0 |
| 3.1650 | < | 3.6650 | 3.4150 | 0.5000 | 14 | 14.0 | 48 | 48.0 |
| 3.6650 | < | 4.1650 | 3.9150 | 0.5000 | 18 | 18.0 | 66 | 66.0 |
| 4.1650 | < | 4.6650 | 4.4150 | 0.5000 | 17 | 17.0 | 83 | 83.0 |
| 4.6650 | < | 5.1650 | 4.9150 | 0.5000 | 17 | 17.0 | 100 | 100.0 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 100 | 100.0 |  |  |

**GPA2**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ***GPA2*** |  |  |  |  |  | *cumulative* | |
| *lower* |  | *upper* | *midpoint* | *width* | *frequency* | *percent* | *frequency* | *percent* |
| -0.5 | < | 1.5 | 0.5 | 2.0 | 4 | 4.0 | 4 | 4.0 |
| 1.5 | < | 3.5 | 2.5 | 2.0 | 22 | 22.0 | 26 | 26.0 |
| 3.5 | < | 5.5 | 4.5 | 2.0 | 74 | 74.0 | 100 | 100.0 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 100 | 100.0 |  |  |

**Weight**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  | ***Weight*** |  |  |  |  |  | *cumulative* | |  |
|  | *lower* |  | *upper* | *midpoint* | *width* | *frequency* | *percent* | *frequency* | *percent* |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  | 44.5 | < | 49.5 | 47.0 | 5.0 | 8 | 8.0 | 8 | 8.0 |  |
|  | 49.5 | < | 54.5 | 52.0 | 5.0 | 7 | 7.0 | 15 | 15.0 |  |
|  | 54.5 | < | 59.5 | 57.0 | 5.0 | 11 | 11.0 | 26 | 26.0 |  |
|  | 59.5 | < | 64.5 | 62.0 | 5.0 | 13 | 13.0 | 39 | 39.0 |  |
|  | 64.5 | < | 69.5 | 67.0 | 5.0 | 13 | 13.0 | 52 | 52.0 |  |
|  | 69.5 | < | 74.5 | 72.0 | 5.0 | 11 | 11.0 | 63 | 63.0 |  |
|  | 74.5 | < | 79.5 | 77.0 | 5.0 | 12 | 12.0 | 75 | 75.0 |  |
|  | 79.5 | < | 84.5 | 82.0 | 5.0 | 10 | 10.0 | 85 | 85.0 |  |
|  | 84.5 | < | 89.5 | 87.0 | 5.0 | 13 | 13.0 | 98 | 98.0 |  |
|  | 89.5 | < | 94.5 | 92.0 | 5.0 | 2 | 2.0 | 100 | 100.0 |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 100 | 100.0 |  |  |  |

**Height**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |
|  | ***Height*** |  |  |  |  |  | *cumulative* | |
| *lower* |  | *upper* | *midpoint* | *width* | *frequency* | *percent* | *frequency* | *percent* |
|  |  |  |  |  |  |  |  |  |
| 149.5 | < | 154.5 | 152.0 | 5.0 | 13 | 13.0 | 13 | 13.0 |
| 154.5 | < | 159.5 | 157.0 | 5.0 | 12 | 12.0 | 25 | 25.0 |
| 159.5 | < | 164.5 | 162.0 | 5.0 | 11 | 11.0 | 36 | 36.0 |
| 164.5 | < | 169.5 | 167.0 | 5.0 | 15 | 15.0 | 51 | 51.0 |
| 169.5 | < | 174.5 | 172.0 | 5.0 | 16 | 16.0 | 67 | 67.0 |
| 174.5 | < | 179.5 | 177.0 | 5.0 | 10 | 10.0 | 77 | 77.0 |
| 179.5 | < | 184.5 | 182.0 | 5.0 | 13 | 13.0 | 90 | 90.0 |
| 184.5 | < | 189.5 | 187.0 | 5.0 | 10 | 10.0 | 100 | 100.0 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 100 | 100.0 |  |  |

1. Represent the selecting data in graphical form as follows:
2. Time series graph for **Admit Year**.
3. Vertical bar graph for **Blood Group**.
4. Pareto chart for **College**.
5. Pie graph for **Gender**.
6. Histograms for **GPA1** and **GPA2**.

**GPA1**

**GPA2**

1. Frequency polygon for **Weight**.
2. Ogive for **Height**.
3. Summarize the selecting data using measures of central tendency (mean, Median, mode, and midrange) for **Weight**.

|  |  |
| --- | --- |
| **The central tendency’ measure** | **value** |
| Mean | 67.91 |
| Median | 45 |
| Mode | 90 |
| Midrange | 22.5 |

1. Summarize the selecting data using measures of variation (range, variance, and standard deviation) for **Height**.

|  |  |
| --- | --- |
| **The measure of variation** | **value** |
| range | 39 |
| variance | 127.90 |
| standard deviation | 11.31 |

1. Construct a box plot of the selecting data for **GPA1** and **GPA2**.
2. Box plot of **GPA1**
3. Box plot of **GPA2**