Foundations of the Course

1. Students know enough algebra, they don't need advanced skills with letter manipulation.
2. Students need to be able to interpret and explain their equations, charts, tables, and graphs.
3. Students need to calculate with something other than a graphing calculator.
4. Approximately $80 \%$ of BSU grads need at least one Statistics course, They need a foundation.

## Correlation versus Causation

Physics professor: Ice Cream Cones and Thunder Storms Strong Correlation ??????

| Location | Year | Term | Name | Aae (vear) | Heiaht (cm) | Shoe Size | Sex (f.m) | Foot Lenath (cm) | Forearm (cm) | Academic Status | Favorite M\&M Color | No. of Siblinas | Miles from home to school | Birthday | Amount of last haircut |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BSU | 2012 | Sorina | Amanda | 20 | 163.53 | 9 | female | 24.7 | 27.23 | iunior | vellow | 2 | 1 | 2-Feb-1991 | 13 |
| bsu | 2012 | Spring | Kristina | 20 | 167.21 | 10 | temale | 25.2 | 29 | freshmen | green | 1 | 1 | \#\#\#\#\#\#\#\#\#\# | 8.99 |
| bsu | 2012 | Spring | Samantha | 19 | 160.89 | 7 | female | 23.8 | 25 | junior | red | 9 | 0 | 9-Aug-1992 | 15 |
| BSU | 2012 | Sorina | Matthew | 26 | 180.34 | 11 | Male | 27.9 | 27.8 | Junior | Blue | 4 | 3 | 23-Feb-1985 | 16 |
| bsu | 2012 | Sprina | Dustin | 20 | 190.1 | 14 | Male | 30.1 | 32.1 | Sophomore | Blue | 4 | 1 | 29-Oct-1991 | 0 |
| BSU | 2012 | Spring | Kim | 46 | 174.19 | 11 | female | 26.4 | 28.5 | junior | red | 9 | 15 | 2-Oct-1965 | 14 |
| BSU | 2012 | Spring | zach | 18 | 180.81 | 10 | male | 26.3 | 29.5 | freshmen | blue | 2 | 1 | 14/05/1993 | 0 |
| BSU | 2012 | Sorina | Amber | 17 | 159.31 | 7 | female | 23.1 | 24.25 | pseo | red | 3 | 60 | 10-Oct-1994 | 23 |
| BSU | 2012 | Sorina | Andrew | 49 | 157.51 | 8.5 | male | 24.9 | 28.5 | iunior | red | 1 | 5 | 2-Jan-1962 | 13 |
| BSU | 2012 | Sorina | Andrew | 20 | 178.69 | 10 | male | 26.6 | 26.51 | sophomore | areen | 2 | 1 | 29/10/91 | 14 |
| BSU | 2012 | Spring | Mark | 18 | 182.91 | 11 | Male | 26.4 | 28.21 | freshmen | Orange | 2 | 1 | 24/08/93 | 17 |
| BSU | 2012 | Sorina | Jocelvn | 19 | 166.1 | 8.5 | female | 24.9 | 28.75 | Sophomore | Blue | 2 | 40 | 217/1992 | 16 |
| BSU | 2012 | Sprina | Allison | 18 | 172.11 | 10 | female | 26.2 | 28.5 | freshmen | green | 3 | 200 | 5-Sep-1993 | 25 |
| BSU | 2012 | Sorina | Alexandria | 19 | 159.2 | 8 | Female | 23.2 | 25.5 | freshmen | areen | 6 | 1 | 21-Oct-1992 | 25 |
| BSU | 2012 | Spring | Matthew | 21 | 183.09 | 12 | Male | 27 | 30.06 | Senior | Green | 4 | 1 | 30-Aug-1990 | 0 |
| BSU | 2012 | Sorina | Dena | 19 | 169.1 | 8.5 | female | 24.8 | 26 | freshman | oranae | 2 | 1 | 9-Sep-1992 | 5 |
| BSU | 2012 | Sprina | Evelvn | 57 | 162 | 9 | female | 25.4 | 27.43 | Senior | brown | 8 | 1.5 | 30.Jan-1953 | 0 |
| BSU | 2012 | Sorina | Todd | 19 | 192.8 | 13 | male | 32.32 | 34.57 | freshmen | green | 2 | 1 | 23-Nov-1992 | 0 |
| BSU | 2012 | Spring | Riley | 18 | 173.11 | 10 | male | 26.7 | 29.5 | freshmen | blue | 3 | , | 6-Jun-1993 | 0 |
| BSU | 2012 | Sprina | Tom | 22 | 180.89 | 11 | male | 28 | 30 | senior | red | 5 | 1 | 20/06/1989 | 11.99 |
|  |  |  |  | Correlatio Codfficien |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Variable 1 | Variable 2 | $t$ | Type |  |  |  |  |  |  |  |  |  |  |
|  |  | Aae | Heiaht | -0.29746 | Weak |  |  |  |  |  |  |  |  |  |  |
|  |  | Aae | Shoe Size | -0.06428 | NO |  |  |  |  |  |  |  |  |  |  |
|  |  | Heiaht | Shoe Size | 0.912479 | Strona |  |  |  |  |  |  |  |  |  |  |


| Country | Nobel Prize C | nald's Count |  |
| :---: | :---: | :---: | :---: |
| Australia | 6 | 701 |  |
| Austria | 11 | 148 | Correlation Coefficient Type |
| Belgium | 9 | 64 | 0.903556 Strong |
| Canada | 10 | 1154 |  |
| Czech Repub | 2 | 60 | State a possible "lurking" variable |
| Denmark | 13 | 99 |  |
| Finland | 2 | 93 |  |
| France | 49 | 857 |  |
| Germany | 77 | 1091 |  |
| Greece | 2 | 48 |  |
| Hungary | 3 | 76 |  |
| Iceland | 1 | 3 |  |
| Ireland | 5 | 62 |  |
| Italy | 14 | 290 |  |
| Japan | 12 | 3598 |  |
| Luxembourg | 0 | 6 |  |
| Mexico | 2 | 205 |  |
| Netherlands | 15 | 205 |  |
| New Zealand | 0 | 149 |  |
| Norway | 8 | 55 |  |
| Poland | 5 | 181 |  |
| Portugal | 2 | 91 |  |
| Slovakia | 2 | 10 |  |
| South Korea | 1 | 243 |  |
| Spain | 6 | 276 |  |
| Sweden | 30 | 227 |  |
| Switzerland | 22 | 119 |  |
| Turkey | 0 | 133 |  |
| United Kingdc | 100 | 1115 |  |
| United States | 270 | 12804 |  |



Correlation Coefficient 0.3491335


