Rubric

Here is the breakdown for the points. Note that the breakdown follows a tree diagram, so any sub-bullet is the breakdown of the parent bullet's point. For instance, the entire assignment is worth 60 points. The exploration part is worth 35 of the 60 points (58% of the total score). Writing skill is worth 6 of those 35 points. And so on.

Total Assignment - 60 points

- (35 points) Exploration Report
  - (6 points) Writing Skills
    - (2 points) Correct grammar usage.
    - (1 point) Includes citations.
    - (1 point) Includes figures.
    - (1 point) Is in the IMRAD format (organized well).
    - (1 point) The report looks pretty.
  - (5 points) Appendix Dictionary
    - (1 point) Dictionary is included.
    - (1 point) Dictionary is well though out. Effort is clearly demonstrated.
    - (1 point) Figures are included.
    - (1 point) Equations are included.
    - (1 point) Recommended words are included.
  - (9 points) Explores effect of angle of attack on lift, drag, and moment.
    - (6 points) Discusses major characteristics of airfoil polar.
      - (2 points) Talks about lift, drag, and moment
      - (1 points) Talks about how lift, drag, and moment are all just functions of alpha... $C_L(\alpha)$, $C_D(\alpha)$, and $C_M(\alpha)$. ... All of these values are inter-related to the angle of attack of the airfoil.
      - (3 points) Talks about major trends, such as stall, zero-lift angle of attack.
    - (3 points) Includes a figure for lift, drag, and moment (1 point each)
  - (4 points) Explores effect of airfoil thickness
    - (1 point) Includes a relevant figure.
    - (1 point) Explains thickness
    - (2 points) Discusses the relationship between thickness and lift (drag and moment optional).
  - (4 points) Explores effect of airfoil camber
    - (1 point) Includes a relevant figure.
    - (1 point) Explains camber
    - (2 points) Discusses the relationship between camber and lift (drag and moment optional).

  - (3 points) Airfoil Polar Comparison
    * (1 point) Includes a relevant figure.
    * (1 point) Compares student's calculated values and experimental/accepted values.
    * (1 point) Includes error calculations.
  - (4 points) Explores effect of Reynold's Number
    * (1 point) Includes a relevant figure.
    * (1 point) Talks about the Reynold's number.
    * (2 point) Discusses the relationship between the Reynold's number and lift (drag and moment optional).

- (25 points) Research Skills
  - (5 points) Template preamble comments.
    * (1 point) Preamble comments are present.
    * (3 points) Comments are correct.
    * (1 point) Comments are pretty and concise.
  - (5 points) Used a branch.
  - (5 points) Used issues properly.
    * (2 points) Issues were used.
    * (2 points) Issues were closed with a comment.
    * (1 point) Issues showed thought and effort.
  - (5 points) Used a pull request.
    * (3 points) Submitted assignment via a pull request.
    * (2 points) Pull request comment demonstrated thought.
  - (5 points) Code was submitted.
    * (4 points) Code used was submitted.
    * (1 point) Code was of good style (not super messy).