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**Understanding the Coulomb and Newton Force Laws** CHRIS VUILLE, Embry-Riddle Aeronautical University — In undergraduate first-year physics courses, the Coulomb and Newton force laws are typically presented as empirically- derived, a consequence of fitting observations to a mathematical model. Here, a simple argument based on natural assumptions make plausible the fact that one charge (mass) is multiplied times the other charge (mass). Further, a generic geometric argument yields the dependence on the inverse square of the distance between the two bodies.

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