

## G302 Class Notes – Angular Measurement

### I. Angular Measurement

#### a. Angular Measurement (based on circle)

##### i. Full Circle = 360 degrees

##### 1. 1 degree = $1/360$ th of circle

##### (1) Subdivisions of Degree

(a) 1 degree = 60 minutes

(b) 1 minute = 60 seconds

(c) 1 degree = 60 min x 60 sec/min = 3600 sec

##### (2) Famous Angular Measurements

(a) Right Angle = 90 degrees

(b) (Straight Angle) Line = 180 degrees

(c) Circle = 360 degrees

(d) Acute Angle < 90 degrees

(e) Obtuse Angle: between 90-180 degrees

(f) Complementary Angles – two angles add up to 90 degrees

#### 2. Radians – unit of angular measurement based on the length of an arc circumscribed by a circle

##### a. Circumference of Circle = $2\pi r$ ,

where  $\pi$  = circumference of circle / radius of circle = 3.14, and r = radius of circle

##### b. Circle = 360 degrees = $2\pi$ radians; 180 degrees = $\pi$ radians