SFWR ENG 4E03

Fall 2015  
Note: material covered in [Stats 3Y03 Summary](https://drive.google.com/file/d/0BxW61uJyyN8TNy1iUFE0ZlRMLTg/view) will not be covered in this summary  
  
**Expected Value** [μ]: definition of expected (NOT RIGHT!!)

**Poisson parameter** [λ]:

**Exponential distribution**: not always for time

**Probability Distribution Function (PDF)**:

**Cumulative Distribution Function (CDF)**:

**Uniform Distribution**: no memoryless property

**Exponential Distribution**:

* Memoryless
* Either CDF or PDF of original equation F = 1 – e–λx

*Think chemistry, i.e. cancelling units*

**Device** [i]:

[k]: total number of devices

**Service Time** [S]: time to complete specific job

**Visitation** [V]: given or projected visits/jobs (closed system); cannot be calculated

[E(V)]: calculated visit/job ratio

**Demand** [D]: total service demand





**Time in system** [T]: expected time the job is in the system

**Response Time** [R]:

**Total Jobs** [N]:





**Think time** [Z]: time it takes the user to put a request in and start, it’s kinda like the frequency that users put in requests (seconds / request)



If E[Z] = 0, R = N





**Throughput** [X]: out-rate, jobs / hour of full system



Note: andconverge at their lowest point, so equate them

[Xi]: throughput of individual component



**Utilization** [ρ]: ratio that the time is busy

