MATH 443Topics
Tree descriptions.
A graph with all degrees even has a cycle
Euler Tours
Hall’s Theorem
A regular bipartite has a perfect matching
Maximum Matching equal minimum vertex cover in a bipartite graph.
Tutte’s Matching theorem.
Max Flow Min Cut Theorem
Menger’s Theorem both edge and vertex versions
Directed Graph decomposition into strongly connected components and acyclic connections between strongly connected components.
Any 3-connected graph with at least 5 vertices has a contractible edge.
Tutte’s Wheel Theorem