FANSHAWE

Engage, Empower, Excite, Educate

COURSE PLAN

Course Information	
Course Title:	Game Algorithm & Gems
Course Code:	INFO-6043
Program:	GDP1: Game Development – Advanced Programming
School:	ITY
Term:	Winter
Prepared by:	Michael Feeney

The Course Plan provides an outline of topics that support the course learning outcomes and essential employability skills. It also provides an overview with respect to the scheduling of topics, required preparation for each topic and corresponding learning resources and evaluation items. Using the course plan will help you manage your time to get the most from the course and complete the evaluation items on time. Academic calendar dates are posted here.

Time	Topic	Delivery Details: Evaluation
Week 1-2	Basic containers (smart array, linked list, tree, map, hash) and run-time trade-offs.	
Week 2-4	Threading (basics, asynchronous asset loading/background loader, etc.), synchronization and inter-communication	
Week 5-6	Key algorithms: sorting; dynamic programming; divide and conquer; compression and checksum; tree and graph traversal.	
Week 7	Mid-term exam	Mid-term exam, Project #1
Week 8	Persistence (file, database, streaming, etc.) – depends on how much SQL you want/know	
Week 8-9	Memory allocators and memory management	
Week 10	Terrain implementation (height fields, etc.), streaming large content data, etc.	
Week 11- 12	Level of Detail (LOD): basic, Lindenmayer systems, Real-time Optimally Adapting Mesh (ROAM), etc.	
Week 13- 14	GPGPU and other topics	
Week “15”	Final-Exam/Game Jam	Final Exam, Project #2
Ongoing:	(optional) PlayStation development (using SDK)	

Note: The Course Plan may change according to students’ learning needs and/or unanticipated disruptions. You will be notified of any significant change via FOL prior to changes being implemented as specified in Policy A113.