

Fall 2018 ICOM/CIIC/INSO Advanced Courses

CIIC 4019 / ICOM 6025. High Performance Computing

Pre-requisites: CIIC 4020 or ICOM 4035

MJ 9:00-10:15 AM

Dr. Wilson Rivera (wilson.riveragallego@upr.edu)

Study of the fundamentals concepts associate with the performance of a computing system. Discussion of techniques for the reduction of operations with the aim of minimizing the response time of a system to problems whose solution poses a high demand of computational resources. Study of parallelization, and concurrency strategies, and practical experiences with the use of systems and tools implementing them.

CIIC 5995/CIIC 8995. Big Data Analytics

Pre-requisites: ININ 4010 and (CIIC 4020 or ICOM 4035), or Permission if Director

MJ 5:00 - 6:15 PM

Dr. Manuel Rodríguez (manuel.rodriguez7@upr.edu)

Introduction to the principles of big data systems, and analytics techniques that process large amounts of data by means of clusters/clouds and parallel computing techniques. Topics include: map-reduce systems, large-scale cluster-based file systems, query processing with map-reduce, memory-resilient datasets, data warehousing, data mining, machine learning fundamentals, stream analytics, graph analytics and reliability.

ICOM 5018 / CIIC 5018. Cryptography and Network Security

Pre-requisites: CIIC 4050 or ICOM 5007

LWV 12:30- 1:20 pm

Dr. Kejie Lu (kejie.lu@upr.edu)

Theoretical and practical aspects of computing system and network security, threat models, system vulnerability to attacks such as: hackers, malicious code, Trojan horses, viruses, and worms, cryptographic techniques used to defend systems from such attacks.

INSO 4111 / ICOM 6095. Computer Human Interaction

Pre-requisites: CIIC 4020 o ICOM 4035

Distance Course

Dr. Néstor Rodríguez (nestorj.rodriguez@upr.edu)

Introduction to the principles of human-computer interaction with the objective of developing the skills necessary to design and implement graphical user interfaces (GUI). Topics include: cognitive psychology, human factors, and interaction styles. Practice in designing and evaluating the usability of various graphical user interfaces.