WPI DATA SCIENCE Ph.D.
BREADTH and *DEPTH* CORE COMPETENCY REQUIREMENTS

STUDENT NAME: _____ WPI ID: _____

Faculty Advisor: _____

1. Core *Breadth* Competency: Students must take a course from each of five Core DS Categories - 15 credits.

2. Core *Depth* Competency: Students must take 2 additional courses from any of 5 Core DS Categories - 6 credits.

3. Only courses with a **B** grade or higher may be counted toward the Ph.D. Competency Requirements.

4. Students must earn an **A** in <u>4 of the 7</u> Core Competency Category Courses to meet Ph.D. Competency Requirements.

CORE COMPETENCY CATEGORIES

Students without prior background in a Core DS Category are advised to take the course listed with a star. *

With prior advisor's approval, students may submit a petition to take a course other than those in a Core DS Category.

		SEMESTER	GRADE
1. INTEGRATIVE DATA SCIENCE:			
DS 501 *	Introduction to Data Science		
2. MATHEMATICAL ANALYTICS:		SEMESTER	GRADE
DS 502/MA 543 *	Statistical Methods for Data Scientists		
MA 542	Regression Analysis		
MA 554	Applied Multivariate Analysis		
3. DATA ACCESS and MANAGEMENT:		SEMESTER	GRADE
CS 542 *	Database Management Systems		
MIS 571 *	Database Applications Development		
CS 561	Advanced Topics in Database systems		
DS 503/CS 585	Big Data Management		
4. DATA ANALYTICS and MINING:		SEMESTER	GRADE
CS 548 *	Knowledge Discovery and Data Mining		
CS 539	Machine Learning		
DS 504/CS 586	Big Data Analytics		
5. BUSINESS INTELLIGENCE and CASE STUDIES:		SEMESTER	GRADE
MIS 584 *	Business Intelligence		
MKT 568	Data Mining Business Applications		

APPROVED PETITIONED COURSES

Transferred Courses: *Prior Approval via Petition* to count a course towards a Core Competency *must be attached.*

COURSE NUMBER	COURSE TITLE	CREDITS	GRADE	OTHER
Course 1:				
Course 2:				
Course 3:				
Course 4:				
Course 5:				
Course 6:				

STUDENT, FACULTY and GRADUATE ADVISOR SIGNATURES

STUDENT SIGNATURE: DATE:

Student Printed Name:

FACULTY ADVISOR SIGNATURE: DATE:

Faculty Advisor Printed Name:

GRADUATE COORDINATOR SIGNATURE: DATE:

Graduate Coordinator Printed Name:

Please complete this form once all your Ph.D. Core Competency Requirements have been successfully met.