NRLT Curriculum Crosswalk				
	COURSE #	COURSE TITLE	LEC	LAB	Page #
I. SAFETY					
I-A General jobsite safety awareness					
1) Why safety is important					
2) Key factors involved with safe work practices					
3) Develop a respect for electricity					
a) be aware of dangers of shock					
b) describe locations of potential shock hazards					
c) demonstrate use of Multi-Meter and other devices to determine if the system is energized					
d) demonstrate techniques for working on energized circuits					
4) Hazards created by poor housekeeping on the job					
5) Maintain safe work area and tools					
6) Be aware of the dangers of falling objects					
7) Respect and obey job safety rules					
8) Look up and Live (High Voltage above)					
I-B. Emergency procedures					
1) First aid training and CPR					
2) Accident Reporting					
I-C. Compliance with OSHA 10 and EPA regulations					
1) Attend and/or conduct regular safety meeting					
2) General OSHA requirements on the jobsite					
a) OSHA 10					
3) The guidelines for OSHA Assured Grounding and GFI usage					
4) Use of material safety data sheets (MSDS) to identify and properly handle hazardous materials(e.g. cleaning fluids, PCB Ballast and Universal Waste (Lamps)					

NRLT Curriculum Crosswalk						
				COURSE #	**COURSE TITLE**	**LEC**	**LAB**	**Page #**
I-D.	**Substance abuse**							
I-E.	**PPE (Personal Protective Equipment)**							
	A. Purpose and Use of PPE (LAB Emphasis)					**less**	**more**	
	1) Gloves							
	2) Safety Glasses							
	3) Hard Hats							
	4) Boots							
	5) Reflective							
	6) Fall Protection							
	7) Lock-out Tag-out							
I-F.	**AERIAL EQUIPMENT (LAB Emphasis)**					**less**	**more**	
	1) Ladder							
	2) Rolling Scaffolding							
	3) Scissor Lifts							
	4) Aerial Lifts							
II.	**MATH**							
II-A	Appropiate mathematical calculations to solve for							
	unknowns							
	1) Arithmetic operators							
	2) Problems involving fractions							
	3) Reducing fractions to lowest terms							
	4) Wattage and Amperage used by Luminaires							
	and Lamps							
III.	**ELECTRICAL THEORY**							
III-A.	Basic electrical theory							

1) Define terms, units of measure							
NRLT Curriculum Crosswalk							
					COURSE #	**COURSE TITLE**	**LEC**	**LAB**	**Page #**
2) Electron flow									
3) Producing electrical current									
4) Products (effects of electrical current)									
Grounding and GFI usage									
III-B. Ohm's Law									
III-C. Series circuits									
1) Components									
III-D. Parallel circuits									
1) Components									
2) Differences between series and parallel									
circuits									
3) Ohm's Law									
V. CODE REQUIREMENTS									
V-A. National Electrical Code and local code									
1) Purpose and intent of electrical codes									
2) Scope on NEC (NFPA 70)									
3) How local codes may differ from NEC									
4) Using and Navigating the NEC									
5) Title 24 Lighting Requirements (Part 6)									
VI. CONDUCTORS									
VI-A. Various types of conductors (LIGHTING)									
1) Types of conductors and insulators									
2) Why some materials are better conductors									
or insulators than others									
3) Effect of heat on insulators									
4) Sizing conductors									

a) Use American wire gauge chart				
NRLT Curriculum Crosswalk				
	COURSE #	**COURSE TITLE**	**LEC**	**LAB**	**Page #**
VII. CONDUIT, RACEWAYS					
a) Terms associated with conduits and raceways					
b) Terms associated with lighting panels					
VIII. FUNDAMENTALS OF LIGHTING					
a) Visually perceived radiant light					
b) CRI - Color rendering index					
IX. LIGHTING SYSTEMS (LAB Emphasis)					
IX-A. Function, operation and characteristics lamps					
1) Incandescent					
2) Fluorescent					
3) High Intensity Discharge					
4) Induction lamps					
5) Neon					
6) LED					
IX-B. Function, operation and characteristics of					
ballast, drivers and transformers					
1) Fluorescent Ballast					
2) High Intensity discharge ballast					
3) LED Drivers					
4) Neon Transformers					
5) Induction Drivers					
6) Low voltage lighting transformers					
(Track lighting)					
LIGHTING CONTROLS (LAB Emphasis)					
X-A. Function, operation and characteristics of					
lighting controls					

1) Occupancy Sensors							
NRLT Curriculum Crosswalk							
					COURSE #	**COURSE TITLE**	**LEC**	**LAB**	**Page #**
2) Daylight Harvesting									
3) Astronomical/Clocks/Mechanical and Digital									
4) Low voltage controls									
5) Photo controls									
6) EMS systems (overview)									
7) Lighting contactors and Relays									
XI OVERCURRENT DEVICES									
XI-A. Function, operation and characteristics of									
overcurrent protection devices									
1) Purpose and location of devices									
2) Three considerations necessary for the									
electrical component									
3) Interrupting ratings									
4) Short circuit currents									
5) Overload and overcurrent situations									
6) Operation circuit breakers									
7) Function, operation and characteristics									
of ground fault circuit interrupters									
XII GROUNDING SYSTEMS									
XII-A. Function, operation and characteristics of									
grounding systems									
1) Reasons for grounding									
2) General types of faults									
XII LIGHTING SYSTEM MANAGEMENT									
a) Fundamentals of lighting system management									
1) Planned maintenance									

2) Group Relamping					
NRLT Curriculum Crosswalk					
	COURSE #	**COURSE TITLE**	**LEC**	**LAB**	**Page #**
3) Luminaire dirt lumen depreciation					
4) Lamp lumen depreciation					
5) Light level readings					
6) Fixture cleaning					
7) Basic lamp and Ballast trouble shooting					
XIII LIGHTING RETROFIT UPGRADES					
a) Fundamentals of lighting retrofits					
1) Purpose of lighting upgrades					
2) System surveys					
3) System payback analysis					
XIV EGRESS LIGHTING					
a) Fundamentals of exit signs and emergency lighting					
1) Exit signs					
2) Battery back-up luminiares					
3) Emergency lighting					
4) Emergency generator circuits					