

North Electric 2019

Overall Results

Place	Car Num	Team	Penalty	Cost Score	Presentation Score	Design Score	Acceleration Score	Skid Pad Score	Autocross Score	Endurance Score	Efficiency Score	Total Score
1	237	Carnegie Mellon Univ		94.0	71.3	145	100.0	75.0	125.0	275.0	95.7	981.1
2	215	Univ of Michigan - Ann Arbor		61.2	58.5	95	78.9	56.1	101.5	162.4	98.2	711.7
3	225	Université Laval		80.3	46.7	105	22.7	44.1	89.6	182.0	100.0	670.5
4	238	Western University		78.4	58.9	140						277.3
5	236	McGill Univ		81.3	64.9	125	4.5					275.7
6	241	Univ of Akron		67.7	34.3	80	4.5	47.5	6.5	5		245.4
7	243	Univ of Manitoba		73.4	75.0	60						208.4
8	212	Olin College of Engineering	-30	65.7	67.5	90						193.2
9	242	Purdue Univ - W Lafayette		62.7	56.5	60						179.2
10	220	Univ of Waterloo		66.1	36.6	60						162.7
11	211	Univ of Iowa	-50	73.0	51.1	60						134.2
12	221	Univ of Ontario Institute of Tech	-10	51.5	40.1	40						121.6
13	217	Univ of Maryland - College Park	-200	59.0	34.2	40						75.0
	213	Cornell Univ										withdrawn
	214	McMaster Univ										withdrawn
	216	California State Univ - Northridge										withdrawn
	218	Rochester Institute of Technology										withdrawn
	222	Univ of Colorado - Colorado Springs										withdrawn
	229	San Jose State University										withdrawn
	232	Univ of Illinois - Urbana Champaign										withdrawn
	234	Ecole Polytechnique Montreal										withdrawn

North Electric 2019

Design Event Results

Place	Car Num	Team	Raw Score	Penalty	Status	Score
1	237	Carnegie Mellon Univ	145		Final	145
2	238	Western University	150	10	Final	140
3	236	McGill Univ	125		Final	125
4	225	Université Laval	105			105
5	215	Univ of Michigan - Ann Arbor	95			95
6	212	Olin College of Engineering	100	10		90
7	241	Univ of Akron	80			80
8 T	211	Univ of Iowa	60			60
8 T	220	Univ of Waterloo	60			60
8 T	242	Purdue Univ - W Lafayette	60			60
8 T	243	Univ of Manitoba	60			60
12 T	217	Univ of Maryland - College Park	60	20		40
12 T	221	Univ of Ontario Institute of Tech	60	20		40
	213	Cornell Univ				
	214	McMaster Univ				
	216	California State Univ - Northridge				
	218	Rochester Institute of Technology				
	222	Univ of Colorado - Colorado Springs				
	229	San Jose State University				
	232	Univ of Illinois - Urbana Champaign				
	234	Ecole Polytechnique Montreal				

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Presentation Event Results

Place	Car Num	Team	Score
1	243	Univ of Manitoba	75
2	237	Carnegie Mellon Univ	71.3
3	212	Olin College of Engineering	67.5
4	236	McGill Univ	64.9
5	238	Western University	58.9
6	215	Univ of Michigan - Ann Arbor	58.5
7	242	Purdue Univ - W Lafayette	56.5
8	211	Univ of Iowa	51.1
9	225	Université Laval	46.7
10	221	Univ of Ontario Institute of Tech	40.1
11	220	Univ of Waterloo	36.6
12	241	Univ of Akron	34.3
13	217	Univ of Maryland - College Park	34.2
	213	Cornell Univ	
	214	McMaster Univ	
	216	California State Univ - Northridge	
	218	Rochester Institute of Technology	
	222	Univ of Colorado - Colorado Springs	
	229	San Jose State University	
	232	Univ of Illinois - Urbana Champaign	
	234	Ecole Polytechnique Montreal	

North Electric 2019

Cost Event Results

Place	Car Num	Team	Adjusted Cost	Price Score (40)	Cost Audit	Discussion Score (40)	Scenario (20)	Penalty	Score
1	237	Carnegie Mellon Univ	\$17,520	40	-2	38	18		94
2	236	McGill Univ	\$23,229	25.3		36	20		81.32
3	225	Université Laval	\$24,897	22.3		38	20		80.3
4	238	Western University	\$26,049	20.4		38	20		78.44
5	243	Univ of Manitoba	\$29,583	15.6		37.8	20		73.44
6	211	Univ of Iowa	\$22,862	26	-3	38	12		73.04
7	241	Univ of Akron	\$23,027	25.7	-5	36	11		67.71
8	220	Univ of Waterloo	\$29,115	16.2		35.9	14		66.11
9	212	Olin College of Engineering	\$27,587	18.2		27.5	20		65.7
10	242	Purdue Univ - W Lafayette	\$33,391	11.6		31.1	20		62.71
11	215	Univ of Michigan - Ann Arbor	\$38,145	7.7		33.5	20		61.2
12	217	Univ of Maryland - College Park	\$28,937	16.4		27.6	15		59.03
13	221	Univ of Ontario Institute of Tech	\$53,037			31.5	20		51.5
	213	Cornell Univ							
	214	McMaster Univ							
	216	California State Univ - Northridge							
	218	Rochester Institute of Technology							
	222	Univ of Colorado - Colorado Springs							
	229	San Jose State University							
	232	Univ of Illinois - Urbana Champaign							
	234	Ecole Polytechnique Montreal							

Acceleration Event Results

North Electric 2019

Minimum Time (seconds) 4.270
 Maximum Time (seconds) 6.405 150%

Cone Penalty (seconds) 2

Place	Car Num	Team	Run #1			Run #2			Run #3			Run #4			Final		
			Time	Cones	AdjTime	Time	Cones	AdjTime	Time	Cones	AdjTime	Time	Cones	AdjTime	Best Time	Penalty	Score
1	237	Carnegie Mellon Univ	4.341		DNF	4.270		4.270	4.346		4.346	4.339		4.339	4.270		100
2	215	Univ of Michigan - Ann Arbor	4.660		4.660	4.610		4.610	4.747		4.747	4.690		4.690	4.610		78.87
3	225	Université Laval	5.915		5.915	5.848		5.848	5.988		5.988	6.175		6.175	5.848		22.69
4 T	241	Univ of Akron	6.423		DNF	6.489		6.489			DNA			DNA	6.489		4.5
4 T	236	McGill Univ	12.073		12.073	DNF		DNF			DNA			DNA	12.073		4.5
	211	Univ of Iowa			DNA			DNA			DNA			DNA	DNA		
	212	Olin College of Engineering			DNA			DNA			DNA			DNA	DNA		
	213	Cornell Univ			DNA			DNA			DNA			DNA	DNA		
	214	McMaster Univ			DNA			DNA			DNA			DNA	DNA		
	216	California State Univ - Northridge			DNA			DNA			DNA			DNA	DNA		
	217	Univ of Maryland - College Park			DNA			DNA			DNA			DNA	DNA		
	218	Rochester Institute of Technology			DNA			DNA			DNA			DNA	DNA		
	220	Univ of Waterloo			DNA			DNA			DNA			DNA	DNA		
	221	Univ of Ontario Institute of Tech			DNA			DNA			DNA			DNA	DNA		
	222	Univ of Colorado - Colorado Springs			DNA			DNA			DNA			DNA	DNA		
	229	San Jose State University			DNA			DNA			DNA			DNA	DNA		
	232	Univ of Illinois - Urbana Champaign			DNA			DNA			DNA			DNA	DNA		
	234	Ecole Polytechnique Montreal			DNA			DNA			DNA			DNA	DNA		
	238	Western University			DNA			DNA			DNA			DNA	DNA		
	242	Purdue Univ - W Lafayette			DNA			DNA			DNA			DNA	DNA		
	243	Univ of Manitoba			DNA			DNA			DNA			DNA	DNA		

Skidpad Event Results

North Electric 2019

Minimum Time (seconds) 5.470 Cone Penalty (seconds) 0.125
 Maximum Time (seconds) 6.838 125%

Place	Car Num	Team	Driver 1 Run 1				Driver 1 Run 2				Driver 2 Run 1				Driver 2 Run 2				Best Time	Penalty	Score
			Time R	Time L	Cones	AdjTime	Time R	Time L	Cones	AdjTime	Time R	Time L	Cones	AdjTime	Time R	Time L	Cones	AdjTime			
1	237	Carnegie Mellon Univ	6.075	5.592		5.833	5.760	5.277		5.518	5.515	5.912	1	5.838	5.372	5.569		5.470	5.470		75
2	215	Univ of Michigan - Ann Arbor	5.907	6.118		6.012	5.874	5.904		5.889	6.393	5.953	3	6.548	5.846	5.655		5.750	5.750		56.13
3	241	Univ of Akron				DNF	5.988	5.801		5.894				DNA				DNA	5.894		47.45
4	225	Université Laval	7.154	6.353		6.753	6.211	5.444	1	5.952				DNF	6.409	5.565		5.987	5.952		44.14
	211	Univ of Iowa				DNA				DNA				DNA				DNA	DNA		
	212	Olin College of Engineering				DNA				DNA				DNA				DNA	DNA		
	213	Cornell Univ				DNA				DNA				DNA				DNA	DNA		
	214	McMaster Univ				DNA				DNA				DNA				DNA	DNA		
	216	California State Univ - Northridge				DNA				DNA				DNA				DNA	DNA		
	217	Univ of Maryland - College Park				DNA				DNA				DNA				DNA	DNA		
	218	Rochester Institute of Technology				DNA				DNA				DNA				DNA	DNA		
	220	Univ of Waterloo				DNA				DNA				DNA				DNA	DNA		
	221	Univ of Ontario Institute of Tech				DNA				DNA				DNA				DNA	DNA		
	222	Univ of Colorado - Colorado Springs				DNA				DNA				DNA				DNA	DNA		
	229	San Jose State University				DNA				DNA				DNA				DNA	DNA		
	232	Univ of Illinois - Urbana Champaign				DNA				DNA				DNA				DNA	DNA		
	234	Ecole Polytechnique Montreal				DNA				DNA				DNA				DNA	DNA		
	236	McGill Univ				DNF				DNA				DNA				DNA	DNA		
	238	Western University				DNA				DNA				DNA				DNA	DNA		
	242	Purdue Univ - W Lafayette				DNA				DNA				DNA				DNA	DNA		
	243	Univ of Manitoba				DNA				DNA				DNA				DNA	DNA		

Autocross Event Results

North Electric 2019

Minimum Time (seconds) 54.194 Cone Penalty (seconds) 2
 Maximum Time (seconds) 78.581 145% Off Course Penalty (seconds) 20

Place	Car Num	Team	Run #1				Run #2				Run #3				Run #4				Best Time	Penalty	Score
			Time	Cones	Off Course	AdjTime	Time	Cones	Off Course	AdjTime	Time	Cones	Off Course	AdjTime	Time	Cones	Off Course	AdjTime			
1	237	Carnegie Mellon Univ	57.058			57.058	54.194			54.194	55.424			55.424	70.693	3	1	96.693	54.194		125
2	215	Univ of Michigan - Ann Arbor	61.167	2		65.167	60.676			60.676	57.751			57.751	56.040	1		58.040	57.751		101.48
3	225	Université Laval	65.967			65.967	59.729			59.729				DNA				DNA	59.729		89.62
4	241	Univ of Akron	90.830		1	110.830	114.593			114.593				DNA				DNA	110.830		6.5
	211	Univ of Iowa				DNA				DNA				DNA				DNA	DNA		
	212	Olin College of Engineering				DNA				DNA				DNA				DNA	DNA		
	213	Cornell Univ				DNA				DNA				DNA				DNA	DNA		
	214	McMaster Univ				DNA				DNA				DNA				DNA	DNA		
	216	California State Univ - Northridge				DNA				DNA				DNA				DNA	DNA		
	217	Univ of Maryland - College Park				DNA				DNA				DNA				DNA	DNA		
	218	Rochester Institute of Technology				DNA				DNA				DNA				DNA	DNA		
	220	Univ of Waterloo				DNA				DNA				DNA				DNA	DNA		
	221	Univ of Ontario Institute of Tech				DNA				DNA				DNA				DNA	DNA		
	222	Univ of Colorado - Colorado Springs				DNA				DNA				DNA				DNA	DNA		
	229	San Jose State University				DNA				DNA				DNA				DNA	DNA		
	232	Univ of Illinois - Urbana Champaign				DNA				DNA				DNA				DNA	DNA		
	234	Ecole Polytechnique Montreal				DNA				DNA				DNA				DNA	DNA		
	236	McGill Univ				DNA				DNA				DNA				DNA	DNA		
	238	Western University				DNA				DNA				DNA				DNA	DNA		
	242	Purdue Univ - W Lafayette				DNA				DNA				DNA				DNA	DNA		
	243	Univ of Manitoba				DNA				DNA				DNA				DNA	DNA		

Endurance Event Results

North Electric 2019

Minimum Time (seconds) 1769.705
 Maximum Time (seconds) 2566.073 145%

2 20 sec

Place	Car Num	Team	Time	Laps	Cones	Off Course	Other Penalty	Adjusted Time	Endurance Score
1	237	Carnegie Mellon Univ	1769.705	30				1769.705	275
2	225	Université Laval	1978.583	30	1	1		2000.583	182.0
3	215	Univ of Michigan - Ann Arbor	2057.387	30				2057.387	162.4
	241	Univ of Akron	550.872	5				DNF	5

**Formula SAE North 2019
Endurance Event Laptimes**

School	Car	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Cegep du Vieux - Montreal	12	58.415	56.169	56.302	55.180	53.877	53.030	55.392	55.232	57.534	55.061	57.128	54.894	54.387	55.197	54.636	56.637	56.666	60.434	56.966	56.339	55.645	57.726	57.752	65.264	59.927						
Rochester Institute of Technology	16	55.004	54.833	54.082																												
Univ of Michigan - Ann Arbor	17	52.350	50.605	50.760	50.546	50.589	51.359	51.198	50.644	51.020	51.147	51.487	51.255	50.562	50.381	51.077	50.648	49.723	49.997	50.003	49.463	50.287	49.781	49.910	49.620	50.323	50.702	49.878	50.096	49.897	49.750	
Ryerson Univ	18	60.435	54.836	53.779	54.362	53.474	86.002	67.736	64.216	67.020	70.134	65.309	70.382	65.614	66.381	64.835																
Queen's Univ	19	71.731	190.416																													
Univ of Waterloo	20	59.381	55.649	54.959	54.434	53.795	53.268	53.444	52.392	53.759	53.752	55.911	54.861	53.457	53.775	52.982	55.971	57.205	55.031	54.891	53.814	54.694	60.781	55.276	54.822	55.293	55.072	56.434	56.615	56.953	56.723	
Univ of Louisiana - Lafayette	23	67.688	63.001	66.013	64.019	66.336	65.747	65.604	65.439	67.047	63.357	63.543	68.333	61.276	81.498	61.184	98.162	76.626	67.274	65.459	74.035	66.264	65.288	69.023	65.592	70.569	65.003	73.530	131.983	65.077	76.698	
Oakland University	24	57.008	53.937	52.949	52.148	51.067	51.251	51.288	51.941	51.752	52.629	52.027	51.193	50.529	50.893	51.154	53.900	53.460	52.329	52.075	52.605	59.582										
Univ of Connecticut	25	55.407	53.623	56.322	59.535	60.041	58.544	57.948	58.129	56.641	54.091																					
Univ of South Florida	27	55.679	53.634	53.671	54.178	53.242	53.679	53.814	53.098	53.695	53.954	54.015	55.165	57.994	55.581	54.118	56.138	53.947	53.924	53.759	56.358	54.512	53.594	53.567	52.205	52.641	52.469	52.613	52.931	52.694	54.047	
Univ of Pittsburgh - Pittsburgh	28	62.119	57.892	55.774																												
Univ of Alberta	29	64.546	61.381	58.556	56.604	56.459	55.737	55.875	56.245	55.747	55.168	54.683	54.375	55.245	61.131																	
Iowa State Univ	30	61.888	59.098	56.526	69.099	55.561	55.946	55.512	56.724	58.876	55.082	55.542	56.561	58.084	56.336	57.922	69.109	64.572	62.346	59.784	61.003	60.830	58.871	59.308	58.754	58.885	59.235	57.626	58.099	59.628	61.176	
Univ of Toledo	31	56.365	54.305	54.681	54.172	54.968	82.369																									
The Ohio State University	32	55.609	54.072	54.134	53.690	55.827	55.672	53.360	53.342	54.449	62.388	57.332	57.589	56.543	57.924	68.927	55.419	54.761														
Rutgers Univ	34	60.214	57.122	54.495	53.337	53.389	52.452	52.305	52.742	53.050																						
Carleton Univ	35	51.910	50.818	58.598	50.775	50.090	49.833	50.375	50.647	50.828	50.814	50.140	51.236	52.446	51.191	50.491	50.632	50.480	50.673	50.658	51.465	50.994	50.624	55.384	50.734	49.969	49.965	50.202	50.559	57.863	50.760	
Ecole De Technologie Superieure	36	50.389	48.804	47.944	48.048	48.219	48.028	48.287	49.197	51.768	48.812	49.155	48.765	67.321	48.868	53.142	64.084	53.955	51.060	62.029	53.089	59.515	51.047	55.425	56.413	53.767	52.525	50.985	50.518	50.430	72.523	
Univ of Cincinnati	37	53.879	53.173	53.132	53.047	52.471	52.545	52.542	52.610	52.563	52.738	53.313	53.251	54.169	53.480	54.050	52.419	52.029	51.516	51.608	52.159	52.483	51.742	51.848	51.434	51.854	51.986	51.916	52.667	52.163	52.016	
Ecole Polytechnique Montreal	47	54.919	51.823	50.968	50.325	50.271	50.878	50.462	51.149	50.577	51.728	52.022	52.444	51.890	51.236	51.112	52.850	51.718	56.809													
Univ of Michigan - Ann Arbor	215	70.475	68.331	65.904	72.830	62.500	62.652	74.214	67.361	62.745	61.046	66.774	61.056	61.533	64.691	69.978	64.937	62.117	60.473	59.783	64.204	63.723	61.574	63.238	61.837	60.722	62.343	86.036	106.633	96.792	90.885	
Universit� Laval	225	87.028	68.394	64.713	65.214	61.110	66.606	62.755	58.897	59.521	58.940	61.224	61.122	62.208	72.974	72.719	86.071	75.886	88.862	61.298	68.666	57.015	60.586	57.618	66.750	58.345	59.262	64.735	58.409	68.027	63.619	
Carnegie Mellon Univ	237	60.793	56.141	55.292	56.099	54.912	54.419	59.393	60.890	55.400	54.456	55.617	54.606	55.426	56.046	56.950	68.187	62.947	59.724	59.513	59.837	59.834	60.863	69.102	61.987	59.878	60.155	61.371	60.368	60.014	59.485	
Univ of Akron	241	120.017	106.847	119.823	89.297	114.888																										

Times eliminated for Driver Changes or black flags

Individual laptimes are provided for information purposes only.

Laptimes are taken from the either the Formula SAE Endurance timing system or manual timing logs.

These individual laptimes have not been corrected for cone or off course penalties, and may or may not include time spent in black flag, if applicable.

The individual laptimes are not critical, the Formula SAE Endurance event is scored based on the time to complete all specified laps of the Endurance event, plus penalties and applicable black flag time

North Electric 2019

Team Information

Car Num	Team	Country	Weight Includes Accumulator?	Weight (kg)	Weight (lbs)
211	Univ of Iowa	US	NO	203.7	449
212	Olin College of Engineering	US	yes	235.4	519
213	Cornell Univ	US			
214	McMaster Univ	CA			
215	Univ of Michigan - Ann Arbor	US	yes	268.1	591
216	California State Univ - Northridge	US			
217	Univ of Maryland - College Park	US	NO	143.8	317
218	Rochester Institute of Technology	US			
220	Univ of Waterloo	CA	NO	186.4	411
221	Univ of Ontario Institute of Tech	CA	NO	156	344
222	Univ of Colorado - Colorado Springs	US			
225	Université Laval	CA	yes	185.1	408
229	San Jose State University	US			
232	Univ of Illinois - Urbana Champaign	US			
234	Ecole Polytechnique Montreal	CA			
236	McGill Univ	CA	yes	182.3	402
237	Carnegie Mellon Univ	US	yes	221.4	488
238	Western University	CA	NO	191.9	423
241	Univ of Akron	US	yes	235.9	520
242	Purdue Univ - W Lafayette	US	NO	147.9	326
243	Univ of Manitoba	CA	yes	206.8	456