

ELECTRICAL POWER ENGINEERING Department of Electrical Power Engineering

Postgraduate Research Template

#	Student Name / Surname	Nadeem Goolam Hoosen	Start Date	Sep 2018	Supervisor	Dr. E.E. Ojo			
	Title of Project	Controlled Switching of 11kV Vacuum Circuit Breaker for Fault Interruption	Completion	Feb 2021	Co-Supervisor(s)	Prof. M.N. Ijumba			
	Program of Study	f Study (M Eng. / D Eng.) M Eng.				~			
	Student #	Nadeem Goolam Hoosen	Email Address nadeemghoosen@gmail.com						
	Synopsis of The failure of of income for necessity to p The inability f major power of time due to et In High voltag to control the takes into acc breaker. This arcing and inn such that it tr major electric rarely applied circuit breake	Research Project: (< 300 wor the power equipment contribute power utilities. This has raises co out in place protection systems. For protection systems and circuit equipment such as the transform ffects of inrush currents and arcir ge application, a technology calle circuit breaker such that it closes count the effects of the breaker id thus ensuring the circuit breaker rush currents. The technology is a ips quickly and at the correct tim cal equipment and even the circuit on MV applications for fault inte r.	20182018Illed Switching of 11kV n Circuit Breaker for therruptionCompletionFeb 2021Co-Supervisor(s)Prof. M.N. ljumbaD Eng.)M Eng.Goolam HoosenEmail Addressnadeemghoosen@gmail.comch Project: (< 300 words)ver equipment contributes to poor quality of supply that results to loss utilities. This has raises concern in the power industries, prompt the ace protection systems. ection systems and circuit breaker to clear faults on time causes the ent such as the transformers to fail and also circuit breakers to fail over inrush currents and arcing. cation, a technology called controlled breaker switching was developed oreaker such that it closes the breaker at the least current point and e effects of the breaker id e time and temperature when energising the suring the circuit breaker is energised at a time with the least effects of rents. The technology is also implemented on circuit breaker opening kly and at the correct time current zero to prevent damage to the oment and even the circuit breakers. The implementation of this is applications for fault interruption and was never done using a vacuumresearch is to implement the controlled switching technology on a 11kV ard breaker PSCAD coupled with hypothesised formulas to g times. The effects of this implementation will be analysed to ication has reduced the arcing time and inrush currents during fault						
	The intention MV vacuum si conducted us determine the determine if t interruption the vacuum break equipment co	of this research is to implement witchboard breaker for fault inter ing simulation software PSCAD co e tripping times. The effects of th he application has reduced the a hus assisting in determining if thi ker will improve the lifespan of a onnected to it.	the controlle ruption. Thi pupled with is implemer rcing time a s controlled circuit breal	ed swi s imple hypot ntation and inr switc kers ar	tching technolog ementation will hesised formulas will be analysed ush currents dur hing technology nd other major re	bgy on a 11kV I be as to ed to uring fault iy using a related			