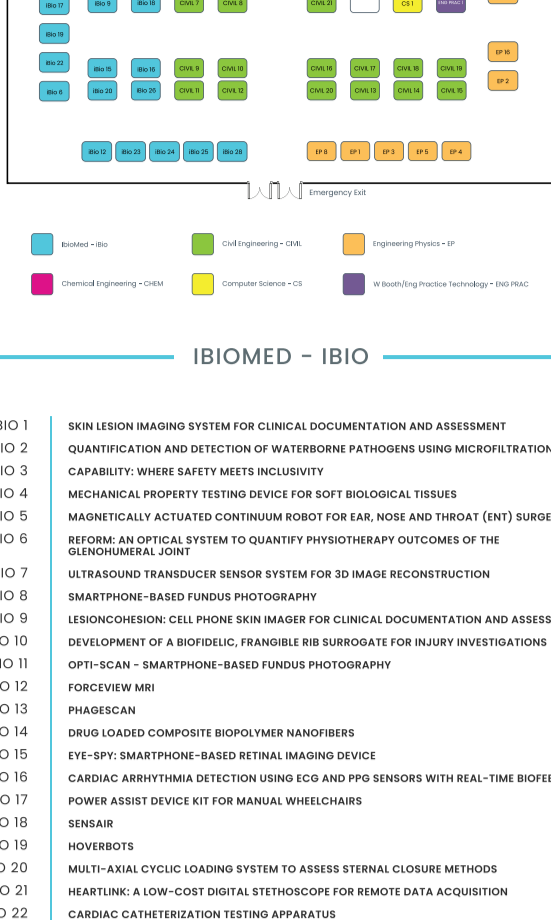


Capstone Expo 2025

Sports Hall



IBIOMED – IBIO

IBIO 1	SKIN LESION IMAGING SYSTEM FOR CLINICAL DOCUMENTATION AND ASSESSMENT
IBIO 2	QUANTIFICATION AND DETECTION OF WATERBORNE PATHOGENS USING MICROFILTRATION
IBIO 3	CAPABILITY: WHERE SAFETY MEETS INCLUSIVITY
IBIO 4	MECHANICAL PROPERTY TESTING DEVICE FOR SOFT BIOLOGICAL TISSUES
IBIO 5	MAGNETICALLY ACTUATED CONTINUUM ROBOT FOR EAR, NOSE AND THROAT (ENT) SURGERIES
IBIO 6	REFORM: AN OPTICAL SYSTEM TO QUANTIFY PHYSIOTHERAPY OUTCOMES OF THE GLENOHUMERAL JOINT
IBIO 7	ULTRASOUND TRANSDUCER SENSOR SYSTEM FOR 3D IMAGE RECONSTRUCTION
IBIO 8	SMARTPHONE-BASED FUNDUS PHOTOGRAPHY
IBIO 9	LESIONCOHESION: CELL PHONE SKIN IMAGER FOR CLINICAL DOCUMENTATION AND ASSESSMENT
IBIO 10	DEVELOPMENT OF A BIOFIDELIC, FRANGIBLE RIB SURROGATE FOR INJURY INVESTIGATIONS
IBIO 11	OPTI-SCAN - SMARTPHONE-BASED FUNDUS PHOTOGRAPHY
IBIO 12	FORCEVIEW MRI
IBIO 13	PHAGESCAN
IBIO 14	DRUG LOADED COMPOSITE BIOPOLYMER NANOFIBERS
IBIO 15	EYE-SPY: SMARTPHONE-BASED RETINAL IMAGING DEVICE
IBIO 16	CARDIAC ARRHYTHMIA DETECTION USING ECG AND PPG SENSORS WITH REAL-TIME BIOFEEDBACK
IBIO 17	POWER ASSIST DEVICE KIT FOR MANUAL WHEELCHAIRS
IBIO 18	SENSAIR
IBIO 19	HOVERBOTS
IBIO 20	MULTI-AXIAL CYCLIC LOADING SYSTEM TO ASSESS STERNAL CLOSURE METHODS
IBIO 21	HEARTLINK: A LOW-COST DIGITAL STETHOSCOPE FOR REMOTE DATA ACQUISITION
IBIO 22	CARDIAC CATHETERIZATION TESTING APPARATUS
IBIO 23	A MYOMETRIC FORCE MEASUREMENT TOOL FOR QUANTITATIVE CLINICAL ASSESSMENT
IBIO 24	RATNAV
IBIO 25	VIRTUAL DRAGON BOAT COACH
IBIO 26	AUTOMATED QUANTITATIVE ANALYSIS TO IMPROVE POST SURGICAL REHABILITATION OF ROTATOR CUFF AND ACL INJURIES
IBIO 28	BUDGET BIOREACTOR: A COST-EFFECTIVE SOLUTION FOR CELL CULTURING

CIVIL ENGINEERING – CIVIL

CIVIL 1	STEELCITY DEVELOPMENTS AFFORDABLE CONDOMINIUM DESIGN FOR HAMILTON
CIVIL 2	GHIBLI GRAND RESORT: A STUDIO GHIBLI-THEMED HOTEL
CIVIL 3	GRYPHON TOWERS
CIVIL 4	THE YOUTH CENTER FOR RECREATION AND LEARNING (YCRL)
CIVIL 5	GAIA'S GROWING GREENS VERTICAL FARM
CIVIL 6	MULTI-STORY PARKING GARAGE WITH TENNIS CLUB
CIVIL 7	VERTICAL FARMING IN THE CANADIAN NORTH
CIVIL 8	HAMILTON LRT AND WEST HARBOUR STATION
CIVIL 9	WEST HARBOUR HEIGHTS DEVELOPMENT
CIVIL 10	THE HELPING & HOUSING PROJECT
CIVIL 11	VIEW 416
CIVIL 12	PRINCESS POINT NATURE CONSERVATION CENTER
CIVIL 13	162-198 BARTON STREET WEST
CIVIL 14	CONFEDERATION BEACH STAGE
CIVIL 15	VANCOUVER FALSE CREEK NET ZERO BUILDING
CIVIL 16	PETERBOROUGH GO
CIVIL 17	A MULTI-FUNCTIONAL VERTICAL FARMING BUILDING
CIVIL 18	WEST HAMILTON COMMUNITY WELLNESS AND RESIDENCE CENTER
CIVIL 19	THE STUDENT NEST AT INNOVATION PARK
CIVIL 20	MCMaster MULTI-USE PARKING STRUCTURE
CIVIL 21	ACCESSIBLE CANOE ADVENTURES CO.

ENGINEERING PHYSICS – EP

EP 1	MICROREACTOR SIMULATOR
EP 2	SMART SPRINKLER SYSTEM
EP 3	CRUSHING TRISO
EP 4	OCEAN WAVE ENERGY CAPTURE FOR REMOTE APPLICATIONS
EP 5	SOLAR CELL DUST MANAGEMENT
EP 6	SMART SCARECROW, BIRD DETERRENCE SYSTEM
EP 7	AUTOMATED HVAC BALANCING
EP 8	MOUNTAIN POWER
EP 9	TOASTBOT: A MODERN SOLUTION TO PRECISION TOASTING
EP 10	AVAILANCHE PHOTODIODE-BASED HOMODYNE DETECTOR FOR QUANTUM RANDOM NUMBER GENERATION
EP 11	RF TRACKER
EP 12	SOLAR CELL COOLING
EP 13	AUTOMATIC BLACKJACK DEALER USING COMPUTER VISION
EP 14	LIGHT TRACKING TELESCOPE MOUNT
EP 15	LASERDRONE
EP 16	EXPRESSIONENSE
EP 17	MOTUS FITNESS TRACKING
EP 18	GOBASKET
EP 19	OPTICAL LASER CORRECTION

CHEMICAL ENGINEERING – CHEM

CHEM 1	INSULATING FOAM CONTROL FOR PRODUCTION OF INSULATED PANELS FOR INDUSTRIAL BUILDINGS
CHEM 2	INSULATING FOAM CONTROL FOR PRODUCTION OF INSULATED PANELS FOR INDUSTRIAL BUILDINGS
CHEM 3	NICKEL-SULPHATE HEXAHYDRATE REFINERY STUDY
CHEM 4	MCMaster CENTRAL PLANT DECARBONIZATION STRATEGY
CHEM 5	MCMaster CENTRAL PLANT DECARBONIZATION STRATEGY
CHEM 6	UTILIZING RECYCLED PLA IN FORMULATING BIOPOLYESTERS FOR A CIRCULAR MATERIAL ECONOMY
CHEM 7	ASSESSING EFFECTS OF DISTINCT COMPATIBILIZERS ON RECYCLED PLA/RPET BLEND FOR BEVERAGE BOTTLE PRODUCTION
CHEM 8	DESIGNING A DECENTRALIZED PATHWAY FOR MICRONIZING AND PELLETIZING HEMP WITH BIOPOLYMER RESIN
CHEM 9	MINI-MBR: A MEMBRANE BIOREACTOR ON THE GO
CHEM 10	MINI MBR ON THE GO
CHEM 11	STEEL 2050: DESIGNING THE FUTURE OF STEEL MANUFACTURING
CHEM 12	GLOBAL SCALE CLIMATE CHANGE ENGINEERING: HYDROGEN ELECTROSYNTHESIS COUPLED TO BIPOLAR MEMBRANE ELECTRODIALYSIS FOR OCEAN ALKALINIZATION ENHANCEMENT
CHEM 13	GLOBAL SCALE CLIMATE CHANGE ENGINEERING: HYDROGEN ELECTROSYNTHESIS COUPLED TO BIPOLAR MEMBRANE ELECTRODIALYSIS FOR OCEAN ALKALINIZATION ENHANCEMENT
CHEM 14	VALORIZATION OF BASIC OXYGEN FURNACE GAS

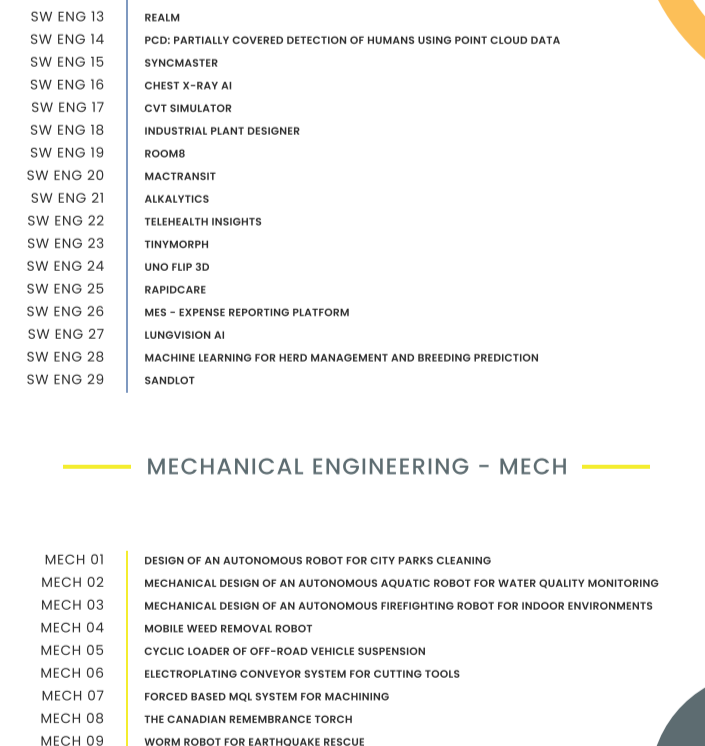
COMPUTER SCIENCE – CS

CS 1	SYSTEMATIC BENCHMARKING TEST CASE GENERATION
CS 2	CHATBOT APPLICATION FOR ENT SURGERY PATIENTS
CS 3	MACCONNECT
CS 4	DEGREEFLOW
CS 5	MES EVENT MANAGEMENT
CS 6	PENTACHESS
CS 7	MODIFY - THE GRAPH-BASED PYTHON VISUALIZER
CS 8	RATBAT
CS 9	DIE SPY
CS 10	POST EARNINGS ANNOUNCEMENT DRIFT TRADING ALGORITHM
CS 11	VISUASSIST
CS 12	PARKITPLACE
CS 13	GLOBAL LAYOFF FORECASTING & ANALYTICS PLATFORM
CS 14	ROOMS4RENT
CS 15	AI FOR CHEST X-RAY DISEASE DETECTION AND CLASSIFICATION
CS 16	MEETINGBOT
CS 17	GIN RUMMY, WITH A TWIST
CS 18	RIDEBUDDY
CS 19	INVISIBLE WATERMARK
CS 20	NEURAL TRAFFIC NETWORKS
CS 22	STUDENT EVALUATION QUALITATIVE COMMENT ANALYSIS
CS 23	STUDENT EVALUATION QUALITATIVE COMMENT ANALYSIS

W BOOTH/ENG PRACTICE TECH – ENG PRAC

ENG PRAC 1	TECKNIX REMOTE CONTROLLED CAR
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Burrigoe Gym



ELECTRICAL & COMPUTING ENGINEERING 01 – ECE01

ECE01 1	RESSORT
ECE01 2	SELF SUSTAINING INTELLIGENT GREENHOUSE
ECE01 3	OFF-GRID AUTONOMOUS HYDROPONIC SYSTEM
ECE01 4	EQUANIMITI
ECE01 5	AUTOMATED PCB SOLDERING ROBOT
ECE01 6	ALIGNPRO
ECE01 7	VOIDLINK
ECE01 8	GREENGROW: AUTOMATED IOT INDOOR PLANT CULTIVATION SYSTEM
ECE01 9	NEXTMOVE
ECE01 10	AUTOMATED PET FEEDER
ECE01 11	WIRE NET
ECE01 12	SPORTS ANALYTICS
ECE01 13	MYHOME
ECE01 14	AIPRON
ECE01 15	ELECTROMAGNETIC ACCELERATOR
ECE01 16	BABY BEACON
ECE01 17	AUTOCART
ECE01 18	BRICS-ARMADASE INTEGRATION SYSTEM
ECE01 19	MOTOVISION HUD
ECE01 20	ANN-E (ANALOG NEURAL NETWORK ENGINE)
ECE01 21	FIT-PLANTS
ECE01 22	SIGNWAVE
ECE01 23	DESIGN, VALIDATION AND OPTIMIZATION OF A SUPER SCALAR OUT OF ORDER RISC-V CORE
ECE01 24	STOCK SENSE
ECE01 25	EMG CONTROLLED ROBOTIC ARM
ECE01 26	SKYKING
ECE01 27	P.H.A.S.E (PRECISION HAPTIC AND SENSORY EXPERIENCE)
ECE01 28	GROOVYJO

ELECTRICAL & COMPUTING ENGINEERING 02 – ECE02

ECE02 1	GARAGE GUARD
ECE02 2	SUPER CAPACITOR MANAGEMENT MODULE
ECE02 3	KEYWAVE – BEGINNER'S PIANO LEARNING AID
ECE02 4	WEATHER AUTOMATED RESPONSE SYSTEM
ECE02 5	HAND MOTION CAPTURE GLOVE
ECE02 6	THE SIXTH SENSE
ECE02 7	SHOCK-STAR LAZER
ECE02 8	REGENERATIVE BREAKING
ECE02 9	ENCLOSED ECOSYSTEM
ECE02 10	UFM (UNIDENTIFIED FLYING MOUSE)
ECE02 11	CHORD FINDER
ECE02 12	GLOW-E MCTHROWY: THE SMART DARTBOARD
ECE02 13	MEDICAL MONITORING SYSTEM
ECE02 14	SMART FIRE DETECTION SYSTEM
ECE02 15	INKSYNCH
ECE02 16	UNDERWATER OPTICAL COMMUNICATION SYSTEM
ECE02 17	SELF-DRIVING BICYCLE
ECE02 18	ELECTRONIC REFEREE SYSTEM FOR PING-PONG
ECE02 19	GAMING FIRST PERSON VIEW CONTROLLER
ECE02 20	REUSABLE SMART CLOTHING TAG & AUTOMATIC CHECKOUT SYSTEM
ECE02 21	BLACKJACK PROBOT
ECE02 22	SIGHTSYNCH: AI CAPTIONING GLASSES
ECE02 23	ULCER GUARD
ECE02 24	UV SHIELD
ECE02 25	FACELOCK
ECE02 26	THE MAGIC MIRROR

SOFTWARE ENGINEERING – SW ENG

SW ENG 1	SOCALGO TEST PLATFORM
SW ENG 2	CODE PLAGIARISM DETECTOR: AN NLP-BASED ALTERNATIVE TO MOSS
SW ENG 3	TANGLED PROGRAM GRAPHS
SW ENG 4	SOURCE CODE ENERGY OPTIMIZER: ECOOPTIMIZER
SW ENG 5	GRADSIGHT
SW ENG 6	MCMaster GSA SOFTBALL LEAGUE PLATFORM
SW ENG 7	SCOREGEN
SW ENG 8	GENREGURU
SW ENG 9	DICE DUELS: DUEL OF THE EIGHTS
SW ENG 10	PLUTOS
SW ENG 11	ORBITWATCH
SW ENG 12	MES FINANCIAL MANAGEMENT PLATFORM
SW ENG 13	REALM
SW ENG 14	PCD: PARTIALLY COVERED DETECTION OF HUMANS USING POINT CLOUD DATA
SW ENG 15	SYNCMaster
SW ENG 16	CHEST X-RAY AI
SW ENG 17	CVT SIMULATOR
SW ENG 18	INDUSTRIAL PLANT DESIGNER
SW ENG 19	ROOMS
SW ENG 20	MACTRANSIT
SW ENG 21	ALKALYTICS
SW ENG 22	TELEHEALTH INSIGHTS
SW ENG 23	TELYMORPH
SW ENG 24	UNO FLIP 3D
SW ENG 25	RAPIDCARE
SW ENG 26	MES – EXPENSE REPORTING PLATFORM
SW ENG 27	LUNGVISION AI
SW ENG 28	MACHINE LEARNING FOR HERD MANAGEMENT AND BREEDING PREDICTION
SW ENG 29	SANDLOT

MECHANICAL ENGINEERING – MECH

MECH 01	DESIGN OF AN AUTONOMOUS ROBOT FOR CITY PARKS'S CLEANING
MECH 02	MECHANICAL DESIGN OF AN AUTONOMOUS AQUATIC ROBOT FOR WATER QUALITY MONITORING
MECH 03	MECHANICAL DESIGN OF AN AUTONOMOUS FIREFIGHTING ROBOT FOR INDOOR ENVIRONMENTS
MECH 04	MOBILE WEED REMOVAL ROBOT
MECH 05	CYCLIC LOADER OF OFF-ROAD VEHICLE SUSPENSION
MECH 06	ELECTROPLATING CONVEYOR SYSTEM FOR CUTTING TOOLS
MECH 07	FORCED BASED MQL SYSTEM FOR MACHINING
MECH 08	THE CANADIAN REMEMBRANCE TORCH
MECH 09	WORM ROBOT FOR EARTHQUAKE RESCUE
MECH 10	SMART GRIPPER FOR HUMAN-ROBOT TEAMWORK
MECH 11	PNEUMATIC NEXT GENERATION COLLABORATIVE ROBOT ARM
MECH 12	FOLDING BOOMS FOR ROBOTIC ARMS IN SPACE
MECH 13	DESIGN OF AN ADVANCED DRYING TECHNOLOGIES TEST APPARATUS
MECH 14	DESIGN OF A CONVEYOR OVEN EXHAUST SYSTEM FOR HEAT RECLAIMING
MECH 15	WASTE HEAT PARAMETER MEASUREMENT TOOL KIT
MECH 16	DESKTOP RECYCLING PLASTIC SHREDDER
MECH 17	DESKTOP PLASTIC PULVERIZER
MECH 18	AUTOMATED ICE FISHING APPARATUS
MECH 19	TENSION OPERATED ROBOT ARM
MECH 20	AUTOMATED ROBOT FOR EVALUATING HIGH-TOUCH SURFACE COATINGS WITH CONTROLLED PRESSURE
MECH 21	DEVELOPMENT OF AN AUTOMATED BRAIDING MACHINE FOR THE BRAIDING OF POLYMER-BASED SUTURES
MECH 22	AUTOMATED FIXTURE FOR TESTING BATTERY CELLS
MECH 23	ELECTRO-HYDROSTATIC ACTUATOR FOR A ROBOT ARM: DESIGN AND SIMULATION
MECH 24	DEVELOPMENT OF CONTINUOUS VELOCITY MEASUREMENT APPARATUS IN AN AQUATIC ENVIRONMENT
MECH 25	THE DEVELOPMENT OF AN APPARATUS FOR SMOOTH FLOW IN AN AQUATIC ENVIRONMENT
MECH 26	OPTIMIZATION OF RECYCLED PETG FILAMENT PRE-PROCESSING
MECH 27	DECOUPLED ROLL AND HEAVE SUSPENSION FOR A FORMULA SAE CAR
MECH 28	HIPNOTIC (JOINT STRETCHING EQUIPMENT)
MECH 29	SYNCHRONIZED SINK EDM
MECH 30	ELECTRIC DUCTED FAN – WIND TUNNEL APPARATUS
MECH 31	MULTI-AXIS THRUST STAND AND ACOUSTICS ANALYSIS SYSTEM FOR ELECTRIC DUCTED FANS
MECH 32	MERIDIONAL CIRCULATION EXPERIMENTS WITH A STRATIFIED WATER CHANNEL
MECH 33	TEAM MERCURY: CANADIAN REDUCED GRAVITY EXPERIMENT (CAN-RGX) – CHARACTERIZING POWDER-LIQUID AGITATION FOR LUNAR DUST-AIDED HABITATION
MECH 34	LAMINAR FLOW WATER TUNNEL
MECH 35	HYBRID ROCKET TEST & FIL SYSTEMS
MECH 36	OAR BOARD FOOTPALE REDESIGN
MECH 37	OPTIMIZATION OF ACTIVE CHILLED BEAMS
MECH 38	DESKTOP REPETITIVE MOTION ASSIST
MECH 39	INTEGRATED DAMPER FOR REPETITIVE MOTION ASSIST DEVICE
MECH 40	TEMPERATURE CONTROL SYSTEM FOR A COOLING HELMET
MECH 41	LONG REACH END EFFECTOR MANIPULATOR FOR REMOTE TOOL DELIVERY IN A NUCLEAR ENVIRONMENT
MECH 42	GOLF CART ELECTRIC BOOSTER
MECH 43	JUMPING WHEEL-LEGGED ROBOT: DESIGN, BUILD AND TEST
MECH 44	

MATERIALS SCIENCE & ENGINEERING – MATLS

MATLS 1	LINKING HYDROGEN TRAPPING SITES AND OTHER MICROSTRUCTURES FEATURES IN STEEL ALLOYS FOR HYDROGEN PIPELINE INFRASTRUCTURE
MATLS 2	UNDERSTANDING METAL MATRIX COMPOSITES FOR FORESTRY APPLICATIONS
MATLS 3	CARBIDE SIZE CONTROL IN CARBON STEEL USING BATCH ANNEALING
MATLS 4	SURFACE POLISHING PROCEDURE DEVELOPMENT FOR IN718 FATIGUE SAMPLES
MATLS 5	SYNTHESIS AND OPTIMIZATION OF ECO-FRIENDLY SLAG-GLASS FOR ABRASIVE BLASTING
MATLS 6	17-4 PH STAINLESS STEEL HEAT TREATMENT OPTIMIZATION
MATLS 7	DEVELOPMENT OF SLAG MELTING APPARATUS
MATLS 8	INVESTIGATION OF THE HEAT-TREATMENT AND ITS EFFECT ON MECHANICAL PROPERTIES OF INCONEL 718
MATLS 9	

MECHATRONICS – TRON

TRON 1	AUTOMATED SURFACE PROFILEOGRAPH
TRON 2	OPTIMIZED GROCERY RETRIEVAL SYSTEM
TRON 3	SMARTREAD
TRON 4	AI MEETING ASSISTANT
TRON 5	AUTOMATED SMOOTHIE MACHINE
TRON 6	ASSISTIVEHAND
TRON 7	EYECAN
TRON 8	AUTONOMOUS SYSTEMS FOR PARKING CARS
TRON 9	MINI-MAC NEXUS
TRON 10	POSTUREPERFECT
TRON 11	INTEGRATED SOFTWARE-IN-LOOP & HARDWARE-IN-LOOP TESTING PLATFORM FOR AUTONOMOUS VEHICLE DEVELOPMENT
TRON 12	GRAB-BOT: GUIDED RETRIEVAL AND AUTONOMOUS BALL-COLLECTOR
TRON 13	SANDMAZE
TRON 14	ESCALAID
TRON 15	AUTONOMOUS ROBOT-TO-HUMAN AND HUMAN-TO-ROBOT OBJECT HANDOVERS
TRON 16	ROUTESHARE
TRON 17	LINEAR INTERCEPTION AND GUIDED HAZARD TRACKING SYSTEM FOR ADVANCED BLOCKING AND ENEMY RESPONSE
TRON 18	CYCLING POWER METER