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#### RV Educational Institutions <sup>®</sup> RV College of Engineering <sup>®</sup>

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Industry Certified Internship

## Centre for Hydrogen and Green Technology Research (CH2GTR)

### Internship Modules for Undergraduate / Postgraduate students

- M1. Development and characterization of functionalized electro/photocatalysts for clean Hydrogen production from water
- M2. Bio hydrogen production from Lignin waste
- M3. Lignin Super Absorbent Polymer (SAP) as a Water Retention Agent in Agricultural Lands
- M4. Design of anaerobic digester for green fuel generation
- M5. Fabrication and testing of solar photovoltaic system for electricity generation
- M6. Development of a simple biomass gasification system
- M7. Modification of toilet/commode surface to reduce amount of flush water a green approach
- M8. Applications of graphene and its derivatives in carbon capture and conversion
- M9. Synthesis and characterization of eco-friendly additives for green fuel generation
- M10. Different gas-water separation techniques for O<sub>2</sub> and H<sub>2</sub> gases with regard to space applications of fuel cells
- M11. Hydrogen permeation/trapping in high strength steels and development of hydrogen impermeable materials/alloys
- M12. Development of a compact Hydrogen Fuel Cell for powering onboard-systems of crewed flight and fulfilling water requirement as a by-product
- M13. Electricity generation system from a renewable energy source for a self-sustained Fuel Cell Vehicle (Floating PV solar power stations)
- M14. Renewable energy powered electrolyzer system to generate H<sub>2</sub> gas for a self-sustained Fuel Cell Vehicle
- M15. Development of a simple fuel cell system to generate hydrogen gas
- M16. Integration of a power source and an electrolyzer with a fuel cell to make it self-sustained
- M17. Integration of a self-sustained fuel cell with an indigenous vehicle
- M18. Product design of a hydrogen sensing system
- M19. IoT enabled measurement system for hydrogen sensing system
- M20. Development of manufacturing process sequence for a hydrogen sensing system
- M21. Development of suppliers list and bill of materials for manufacturing a hydrogen sensing system, its components and sub systems
- M22. Identification of target customers, marketing strategy and competitor analysis of hydrogen sensing systems
- M23. Cash flow and economic analysis of manufacturing hydrogen sensing systems
- M24. Shape and form design / internal functions block diagram of hydrogen sensing systems
- M25. Green nanocoatings for construction and textile industries
- M26. Process Synthesis / Product Driven Process Engineering / Process Intensification / Product Design / Process Design in hydrogen and green technology
- M27. Excel and VBA for problem solving in hydrogen and green technology
- M28. Python for problem solving in hydrogen and green technology
- M29. MATLAB for problem solving in hydrogen and green technology
- M30. An entrepreneurial approach to problem solving in hydrogen and green technology
- M31. Health monitoring, leak detection and tracking process pipelines using AI and ML in H<sub>2</sub> and green technology
- M32. Challenges associated with supplying power to implantable medical devices and use of implantable fuel cells
- M33. Applications of fuel cells in Civil Engineering and disaster management
- M34. Modeling and health monitoring of fuel cells using artificial neural networks
- M35. Quality and reliability of fuel cells as a product of technology
- M36. Hydrogen fuel cell technology in military, automobiles, aviation and aerospace

#### For Further Information Contact:

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