



# VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY : BURLA

(Formerly University College of Engg. Burla-Established by Govt. of Odisha in 1956 & Upgraded in 2009 to A State Govt. University Covered under Section 2(f) & 12(B) of UGC Act.)

P.O: Engineering College, Burla (Siddhi Vihar), Dist: Sambalpur  
Odisha- 768018, INDIA

No. VSSUT/PGS&R/ /2020

Date:

## SUB: LIST OF THE OPEN ELECTIVES OFFERED FOR 5Yr. Int. M.Sc/2 Yr. M.Sc/M.Phil/M.Tech FOR THE ODD-SEMESTER:2020

It is for the information of all concerned that the open electives offered for 5Yr. Int. M.Sc/ 2 Yr. M.Sc/ M.Phil/ M.Tech for the odd-semester: 2020, are enclosed herewith. The students may exercise their preferences by filling the Google-form link: [https://docs.google.com/forms/d/e/1FAIpQLSfF5iZW5NxPed6kD56h\\_F4cS49AtMsBTI4DoIOoinWdexgrjA/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSfF5iZW5NxPed6kD56h_F4cS49AtMsBTI4DoIOoinWdexgrjA/viewform?usp=sf_link), by 15.10.2020 (1 P.M.).

### OPEN-ELECTIVES

Sl.No.	Programme	Branch	Specialization	Open Elective Subjects
1.	5years Integrated M.Sc.	Chemistry	-	<ol style="list-style-type: none"><li>1. Applied nanoscience and nanotechnology (ME/PE/Chem E/MME/Physics)</li><li>2. Environmental Assessment and management (Civil Engg)</li><li>3. Materials Science (ME/PE/MME/Physics/Electronics and TCE)</li><li>4. Fuel and Energy (ME/ Chemical /Physics)</li></ol>
2.	02 Years M.Sc.	Chemistry	Industrial Chemistry / Organics Chemistry	<ol style="list-style-type: none"><li>1. Applied nanoscience and nanotechnology (ME/PE/Chem E/MME/Physics)</li><li>2. Environmental Assessment and management (Civil Engg)</li><li>3. Materials Science (ME/PE/MME/Physics/Electronics and TCE)</li><li>4. Fuel and Energy (ME/Chem E/Physics)</li><li>5. Science of composite materials (ME/PE/MME/Physics)</li></ol>
3.	M.Phil	Chemistry	-	<ol style="list-style-type: none"><li>1. Advanced materials</li><li>2. Characterization of materials</li><li>3. Quantitative and Qualitative analyses</li><li>4. Computational Chemistry-II</li><li>5. Biochemistry</li></ol>
4.	5years Integrated M.Sc.	Physics	-	<ol style="list-style-type: none"><li>1. Elementary Biophysics (IPHOE901)</li><li>2. Medical Physics (IPHOE902)</li><li>3. Radiation Safety (IPHOE903)</li><li>4. Renewable energy and energy harvesting (IPHOE904)</li></ol>

5.	02 Years M.Sc.	Physics	Applied Physics	<ol style="list-style-type: none"> <li>1. Elementary Biophysics</li> <li>2. Medical Physics</li> <li>3. Radiation Safety</li> <li>4. Renewable energy and energy harvesting</li> </ol>
6.	M.Tech	Civil Engg.	Environmental Sc. & Engg.	<ol style="list-style-type: none"> <li>1. Optimization Techniques</li> <li>2. Quantitative Techniques</li> <li>3. Computational and Statistical Methods</li> <li>4. Applications of GIS</li> </ol>
7.	M.Tech	Civil Engg.	Transportation Engg.	<ol style="list-style-type: none"> <li>1. Optimization Techniques</li> <li>2. Computational and statistical methods</li> <li>3. Applications of GIS</li> </ol>
8.	M.Tech	Civil Engg.	Geotechnical Engg.	<ol style="list-style-type: none"> <li>1. Business Analytics</li> <li>2. Industrial Safety</li> <li>3. Operations Research</li> <li>4. Cost Management of Engineering Project</li> <li>5. Composite Materials</li> <li>6. Waste to Energy</li> </ol>
9.	M.Tech	Civil Engg.	Structural Engg.	<ol style="list-style-type: none"> <li>1. Business Analytics</li> <li>2. Industrial Safety</li> <li>3. Operations Research</li> <li>4. Cost Management of Engineering Projects</li> <li>5. Mechanics of Composite Materials</li> <li>6. Waste to Energy</li> <li>7. Optimization Technique</li> </ol>
10.	M.Tech	Civil Engg.	Water Resources Engg.	<ol style="list-style-type: none"> <li>1. Disaster Management and Mitigation</li> <li>2. Project Planning and Management</li> <li>3. Non-Conventional Energy</li> <li>4. Computational and Statistical Methods</li> </ol>
11.	M.Tech	Computer Sc. & Engg.	Computer Sc. & Engg.	<ol style="list-style-type: none"> <li>1. Machine Learning</li> <li>2. Cryptography and Data Security</li> <li>3. Data Mining and Data Warehousing</li> </ol>
12.	M.Tech	Electrical Engg.	Power System Engg.	<ol style="list-style-type: none"> <li>1. Forecasting Methods in Power System</li> <li>2. Operations Research</li> <li>3. Industrial Safety</li> <li>4. Waste to Energy</li> </ol>
13.	M.Tech	Electrical Engg.	PECD	<ol style="list-style-type: none"> <li>1. Non-linear system theory</li> <li>2. Operations Research</li> <li>3. Industrial Safety</li> <li>4. Waste to Energy</li> </ol>
14.	M.Tech	Electrical Engg.	CIE	<ol style="list-style-type: none"> <li>1. SCADA system and applications</li> <li>2. Operations Research</li> <li>3. Guidance, Navigation and Control</li> <li>4. Autonomous Vehicles</li> </ol>
15.	M.Tech	Electronics & TC Engg.	CSE	<ol style="list-style-type: none"> <li>1. Basics of Communication Engineering</li> <li>2. Digital Television</li> </ol>
16.	M.Tech	Electronics & TC Engg.	RFM	<ol style="list-style-type: none"> <li>1. Basics of RF &amp; Microwave Engineering</li> <li>2. Basics of Antenna &amp; Propagation</li> </ol>
17.	M.Tech	Electronics & TC Engg.	VLSI Signal Processing	<ol style="list-style-type: none"> <li>1. Signal Processing</li> <li>2. Basics of VLSI Engineering</li> <li>3. Audio &amp; Video Systems</li> </ol>
18.	M.Tech	Mechanical Engg.	Heat Power Engg.	<ol style="list-style-type: none"> <li>1. Non-conventional energy</li> <li>2. Matrix Computation</li> <li>3. Smart Materials</li> </ol>

19.	M.Tech	Mechanical Engg.	Power Engg.	1. Reliability Engineering 2. Maintenance Engineering & Management 3. Laser Materials Processing 4. Rapid Prototyping
20.	M.Tech	Mechanical Engg.	MDA	1. Computational Methods 2. Vibration Based Condition Monitoring 3. Advance Composites
21.	M.Tech	Production Engg.	MSE	1. World Class Manufacturing 2. Sustainable Manufacturing 3. Micro & Nano Manufacturing
22.	M.Tech	Production Engg.	CAD & CAM	1. Quality Engineering 2. Life Cycle Engineering 3. Advanced Maintenance Technology

Sd/-  
Dean PGS&R

No.VSSUT/PGSR/ 1619/ 2020

DATE: 15.10.2020

Copy to:

1. All Deans / All HODs, for kind information and necessary action.
2. Dean, Academic Affairs / COE / COF / Registrar for kind information.
3. PA to Vice Chancellor for kind information of Hon'ble Vice-Chancellor.

Sd/-  
Dean PGS&R