

Europe Telecom Paris, France The Norwegian University of Science and Technology(NTNU), Norway University of Agder, Norway University of Tartu, Estonia EPF Ecole d'ingenieur, France KTH Royal Institute of Tech., Stockholm, Sweden Malardalen University, Västerås, Sweden The University of Tromsø – The Arctic University of Norway, Norway Paristech, France Politecnico di Milano University, Italy German Academy for Digital Education (DADB) University Grenoble Alpes University of Tartu, Estonia UIT– The Arctic University of Norway, Norway The Polish-Japanese Academy of Information Technology (PJAIT), Poland University of Porto, Portugal Instituto Superior De Agronomia Da Universidade De Liboa, Potugal Bauman Moscow State Technical University (National Research University), (BMSTU) Moscow, Russia

North America including Canada The University of Illinois, USA Memorial University of Newfoundland, Canada University of Central Florida Board of Trustees, USA Oak Ridge National Laboratory (ORNL), USA Human Biosciences, Inc, Gaithersburg, MD, USA Carleton University, Ottawa, Ontario, Canada Uni Health Network, Canada Ontario Universities International, Canada University of Minnesota, USA Kennesaw State University, Kennesaw, USA University of Minnesota Iowa State University, USA

**Procedure for Redressal of Grievances / Appeals of Students** The Senate has approved the following procedure for redressal of grievances / appeals of students:

- The student grievances/appeals related to unfair means shall be decided by the Examination Committee on the recommendations of the Campus level EC Sub Committees.
- The student grievances/appeals related to indiscipline shall be decided by the Vice Chancellor on the recommendations of the Campus Director. The Standing Committees for Student's Discipline examine the case. The Campus Director may forward certain cases at his discretion to the Students Grievance Redressal Committee (SGRC) for further investigation. The final decision on the appeal will be decided by the Vice- Chancellor as per the recommendations of the Director or the report submitted by the SGRC.
- The student grievances/appeals related to admission, fees, scholarships, reservation of seats, student amenities, caste and gender-based discrimination, quality education, harassment or victimization, etc. are heard by the Student Grievance Redressal Committee (SGRC) as per the 'UGC (Redressal of Grievances of Students) Regulations, 2023'. The SGRC will not examine cases that are under the preview of the Examination Committee and the Standing Committee for Students' Discipline.
- The student grievances/appeals related to ragging are processed as per the UGC regulation 2009 on curbing the menace of ragging in Higher Education Institutions, 2009.
- The student grievances/appeals related sexual harassment are processed as per the UGC (Prevention, prohibition and redressal of sexual harassment of women employees and students in Higher Educational Institutions) Regulations, 2015.
- The Ombudsperson shall hear appeals from an aggrieved student, only after the student has availed all other remedies provided under 'UGC (Redressal of Grievances of Students) Regulations, 2023'. The details of the designated

Ombudspersons' are available on Institute's website, a link of the same is <https://web.bitspilani.ac.in/Grievance/> A flow chart for the Redressal of Grievances/appeals of Students is given below: Decision by the Ombudsperson Appeal to the Ombudsperson Decision by the SGRC Complaint by the Student Decision by the Vice Chancellor Appeal by the Student Decision by the Standing Committee for Students' Discipline Decision by the Examination Committee Appeal by the Student Decision by the Campus Level EC Sub Committee Matters related to other grievances Matters related to indiscipline Matters related to Unfair Means

**MINOR PROGRAMMES FOR FIRST DEGREE STUDENTS** "Minor programs" are offered as options for first degree students with the intent of encouraging them to add focus to their supplemental learning (outside a major area) as well as recognizing and certifying the knowledge obtained in an area that is outside of their major area.

General Guidelines

- A minor would allow a Department (or multiple Departments) to offer a package of courses in an area/sub-area to students for whom this area/sub-area would not be part of their (major) program.
- A minor option would allow a student to pursue the study of an area or a sub-area through a set of courses but not as exhaustively as required to obtain a degree (i.e. a major) in that area.
- A minor may be inter-disciplinary (e.g. a minor in Computational Science may include courses in Numerical Analysis, Computational Physics, Computational Chemistry, and Bioinformatics among others).
- A minor will be recognized by means of a separate certificate.

Requirements for a minor

- Courses and Units Requirement: Each minor would be defined by coursework requirement with the following conditions:

Category Minor – Core Minor – Electives Minor – Total

- Elective Pool: Courses 4 (max) 2 (min) 5 (min) Units 12 (max) 6 (min) 15 (min)
- o The pool of electives specific to a minor may include courses from one or more disciplines and may include project / seminar type courses.
- o A student may use at most one project / seminar type course to meet the requirements of a minor.

Overlap in requirements:

- o At most 2 courses (and at most 6 units) out of the above requirement (of 5 courses and 15 units) may be met by mandatory courses of the student's degree i.e. major (or degrees i.e. majors) : i.e. from the general institutional requirement (excluding Humanities requirement) or the (Major) discipline Core(s).
- o No course may be used to meet the requirements of two different minors nor may a course be used to the meet the requirements of two majors and a minor.

• GPA requirement:

- o A student – on completion of the requirements for a minor – must have maintained a cumulative GPA of 4.5 or above (out of 10) in the courses applied to the minor.

Process for declaring / obtaining a minor

- A student – if he/she chooses to pursue a minor – must declare at the end of the 2nd year that he/she will pursue a specific minor. The student will charged a small fee for logistics.
- If and when he/she completes the requirements for the minor – as stipulated above and as stipulated for the specific minor, then he/she may apply for a "minor" certificate.
- If it is verified that the requirements are met then he/she will be awarded a "minor certificate" (separate from a degree – i.e. major – certificate).

• A minor certificate

will be issued only on completion of a degree (i.e. a major). At present Twenty Three minor programs viz. Minor in Aeronautics, Biomedical Engineering, Computational Economics, Computational Mechanics, Computing and Intelligence, Data Science, Data Science in Climate & Health, English Studies, Entrepreneurship, Film and Media, Finance, Management, Materials Science and Engineering, Nanoscience and Nanobiotechnology, Philosophy, Economics and Politics (PEP), Physics, Public Policy, Quantum Information and Technologies, Robotics and Automation, Semiconductor Devices and Technology, Supply Chain Analytics, Water and Sanitation, and Tissue Engineering have been designed. The details of which are given below:

**Minor in Aeronautics Description** Aeronautics is an exhilarating field encompassing the fundamentals of aerodynamics (interaction of air with objects in motion), propulsion (power systems responsible for the generation of thrust for providing motion), structures (design of airframes and material characteristics), and flight mechanics (trajectory study and optimization), as applied to air-borne vehicles within the Earth's atmosphere, and to rockets and spacecrafts outside. Courses & Units Req. 06 courses (min) 18 units (min) Core Courses Course Number Course Title L P U AN F311 Principles of Aerodynamics 3 0 3 AN F312 Aircraft Propulsion 3 0 3 AN F313 Flight Mechanics and Controls 3 0 3 Electives AN F314 Introduction to Flight 3 0 3 AN F315 Aircraft Structures 3 0 3 ME F415 Gas Dynamics 3 0 3 ME F418 Rocket and Spacecraft Propulsion 3 0 3 ME F435 Shape Memory Alloys: Fundamentals and Applications 2 1 3 ME F452 Composite Materials and Design 3 0 3 ME F482 Combustion 3 0 3 ME F485 Numerical Techniques for Fluid Flow & Heat Transfer 3 0 3 EEE F242 Control Systems 3 0 3 EEE F417 Computer Based Control Systems 3 0 3 ME F376 Design Project 3

**Minor in Biomedical Engineering Description** Biomedical Engineering is a long sought after package of courses aiming to cater Pharmacy and Engineering students having aspirations to join Bio Medical Industry. This minor aims to blend the expertise of an engineer into the applied realms of bio medicine through design and development of medical devices and systems; solving complex and multi-disciplinary problems in the field of diagnostics, acquisition, imaging, and analysis of bio signals along with the statistical interpretation of the results. Courses & Units Requirements 05 courses (min) 15 units (min). Core Courses Course No. Course Title L P U BITS F418 Introduction to Biomedical Engineering 3 1 4 PHA F214 Anatomy Physiology & Hygiene 2 1 3 Electives (Science Pool) 01 (min) BIO F215 Biophysics 3 0 3 BITS F315 Introduction to Cognitive Neuroscience 3 0 3 CHEM F414 Bio and Chemical Sensors 3 0 3 MST F333 Introduction to Biomaterials 3 0 3 PHA F215 Introduction to Molecular Biology and Immunology 3 0 3 Electives (Engineering Pool) 02 (min) BITS F415 Introduction to MEMS 3 1 4 BITS F417 Microfluidics and Its Application 4\* BITS F441 Robotics 3 0 3 BIO G532 Biostatistics and Biomodelling 3 1 4 CS F320 Foundations of Data Science 3 0 3 EEE F420 Biomedical Signal Processing 3 1 4 EEE F435 Digital Image Processing 3 0 3 EEE/INSTR F432 Medical Instrumentation 3 0 3 ME F324 Cell and Tissue Biomechanics 3 0 3 IV-104 Minor in Computational Economics Description The joint field of economics, mathematics, and computer science have emerged from converging intellectual needs for

interdisciplinary teaching and research. The contemporary tools and techniques used by computer scientists have become increasingly important for economists working with data to address complex business problems. Students interested in learning about computational mechanism design with applications to economics and especially those whose interest is more generally focused on data analytics will be highly benefitted from this programme. This programme is designed to cater to the needs of the cutting-edge industry thereby combining advanced computational tools with economic reasoning. It would help students to develop a deep background in advanced tools for analysis of economic data, which is essential for making sound economic decisions. The programme combines the strengths of multiple departments to educate students in these important computational skills linked to economics, and to prepare them for careers in economics, finance, and business. Reflecting on this strong interdisciplinary relationship, this programme will also be excellent preparation for graduate study in economics or decision sciences.

Courses & Units

Req. 05 courses (min) 15 units (min) Core Courses Course Number Course Title L P U

ECON F215 Computational Methods for Economics 3 0 3

ECON F241 Econometric Methods 3 0 3

ECON F242 Microeconomics 3 0 3

Electives BITS F314 Game Theory and its Applications 3 0 3

BITS F464 Machine Learning 3 0 3

CS F320 Foundations of Data Science 3 0 3

ECON F342 Applied Econometrics 3 0 3

ECON F419 Advanced Microeconomics 3 0 3

ECON F420 Applied Macroeconomics 3 0 3

MATH F424 Applied Stochastic Process 3 1 4

Minor in Computational Mechanics

Description A minor in Computational Mechanics holds significant justification, driven by the evolving industry demands and advancements. Here are key justifications for choosing this field:

- Interdisciplinary Relevance: Computational Mechanics serves as a bridge between engineering, physics, and mathematics. In today's complex technological landscape, industries increasingly require professionals who can integrate knowledge from diverse domains to solve intricate engineering problems.
- Advanced Simulation Skills: Proficiency in computational tools for intricate simulations and analyses. Vital in aerospace, automotive, and materials science for virtual testing and optimization.
- Industry 4.0 Integration: Plays a crucial role in implementing Industry 4.0 principles. Facilitates the development and application of Digital Twins for real-time system monitoring.
- Optimizing Engineering Designs: Enables the modelling and analysis of complex structures for optimized engineering solutions. Aligns with global sustainability goals.
- Career Opportunities in Emerging Technologies: High demand in additive manufacturing, autonomous systems, and renewable energy. Critical for simulating complex interactions in cutting-edge technologies.
- Research and Development Involvement: Provides opportunities for engaging in impactful research. Opens doors for collaboration with leading experts and institutions.
- Preparedness for Industry Challenges: Systematic and data-driven approach to problem solving. Addresses contemporary challenges in diverse industries.

Courses & Units Required 05 courses (min) 15 units (min) Core Courses Course Number Course Title L P U

MATH F313 Numerical Analysis 3 0 3

ME F427 Continuum Mechanics 3 1 4

Electives BITS F464 Machine Learning 3 0 3

CS F422 Parallel Computing 3 0 3

MATH F425 Numerical Linear Algebra 3 1 4

MATH F426 or ME G512 Mathematical Theory of Finite Element Methods or

Finite Element Methods 3 3 1 2 4 5 ME F321 Data Mining in Mechanical Sciences 2 1 3 ME F485 Numerical Techniques for Fluid Flow and Heat Transfer 3 0 3 ME F430 Fluid-structure Interactions 3 0 3 ME G515 Computational Fluid Dynamics 3 2 5 IV-105 Minor in Computing and Intelligence Description The Minor in Computing and Intelligence aims to enable the students majoring in disciplines other than Computer Science to gain a deeper understanding of computing and artificial intelligence and apply the same in solving problems in diverse domains. While courses like Foundations of Data Structures and Algorithms would help the students with abstract thinking and problem solving, courses like Operating Systems, Artificial Intelligence etc., will give them exposure to the fundamental aspects of computing and intelligent systems. This minor programme is exclusively designed for first-degree students of non-Computer Science disciplines. Courses & Units Required 06 courses (min) 18 units (min) Core Courses Course Number Course Title L P U BITS F232 Foundations of Data Structures and Algorithms 3 1 4 CS F372 Operating Systems 3 0 3 CS F407 Artificial intelligence 3 0 3 Electives BITS F311 Image Processing 3 0 3 BITS F452 Blockchain Technology 3 0 3 BITS F459 Computer Vision 3 1 4 BITS F463 Cryptography 3 0 3 BITS F464 Machine Learning 3 0 3 CS F212 Database Systems 3 1 4 CS F213 Object Oriented Programming 3 1 4 CS F301 Principles of Programming Languages 2 0 2 CS F303 Computer Networks 3 1 4 CS F314 Software Development for Portable Devices 2 1 3 CS F315 Information and Communication Technologies and Development 3 0 3 CS F321 System Security 3 0 3 CS F415 Data Mining 3 0 3 CS F437 Generative Artificial Intelligence 3 0 3 IS F311 Computer Graphics 3 0 3 IS F341 Software Engineering 3 1 4 Minor in Data Science Description The minor in Data Science aims to enable students to learn the basic skills required by Data Scientist for today's world. Data Science is becoming ubiquitous to all kinds of industry and opening up new avenues of business. This minor will help students to apply knowledge from Mathematics, Statistics and Computing for analyzing data collected from different kinds of sources in their respective engineering applications and make meaningful and actionable insights. Courses & Units Required 5 courses (min) 15 units (min) Core Courses Course Number Course Title L P U BITS F464 Machine Learning 3 0 3 CS F320 Foundations of Data Science 3 0 3 MATH F432 Applied statistical Methods 3 0 3 Electives BITS F453 Computational Learning Theory 3 0 3 BITS F454 Bio-Inspired Intelligence: Algorithms and Applications 3 0 3 BITS F459 Computer Vision 3 1 4 CS F317 Reinforcement Learning 3 0 3 CS F407 Artificial Intelligence 3 0 3 CS F415 Data Mining 3 0 3 CS F425 Deep Learning 3 0 3 CS F426 Graph Mining 3 1 4 CS F429 Natural Language Processing 3 0 3 CS F432 Brain-inspired Deep Learning 3 0 3 CS F433 Computational Neuroscience 3 0 3 IV-106 Minor in Data Science CS F434 Data science for Healthcare 3\* CS F437 Generative Artificial Intelligence 3 0 3 CS F469 Information Retrieval 3 0 3 CS G519 Social Media Analytics 3 1 4 MATH F212 OR ME F320 Optimization OR Engineering Optimization 3 0 3 MATH F353 Statistical Inference and applications 3 0 3 MATH F424 Applied Stochastic Processes 3 1 4 MATH F471 Nonlinear Optimization 3 0 3 Minor in Data Science in Climate and Health Description The minor in Data Science aims to enable students to learn the basic skills required by Data Scientist for today's world. Data Science is becoming ubiquitous to all kinds

of industry and opening up new avenues of business. This minor will equip students as emerging professionals with the interdisciplinary data skills needed to address challenges at the intersection of climate and health. This new minor programme will train data practitioners on the front lines of the climate crisis to help advance solutions to climate-related health issues.

Courses & Units Required 06 courses (min) 17 units (min)

Core Courses

Course Number Course Title L P U

BITS F329	Project on Social and Environmental Applications of Data Science	3*
BITS F464	Machine Learning	3 0 3
CS F320	Foundations of Data Science	3 0 3
MATH F432	Applied statistical Methods	3 0 3
Electives (Any two)	CE F326 Impact of Climate Change on Water	2 1 3
CS F434	Data science for Healthcare	3*
GS F212	Environmental Development and Climate Change	3 0 3
MPH G510	Biostatistics and Computers in Public Health	3 2 5

Minor in English Studies Description English has a rich linguistic, literary and cultural heritage. The classic literary masterpieces of English are still widely read and appreciated. English has also evolved over centuries and is now considered as the pre-eminent means of communication in the various sectors such as business, diplomacy, mass media, education, etc., across the globe. The Minor in English Studies introduces students to the language and literary canons, and renders them with adequate exposure not only to the cultural and linguistic aspects but also to practical applications of English language and literature. In particular, the core and elective courses included in the Minor would encourage students to acquire a critical understanding of literary and linguistic analyses, and the capacity to engage meaningfully in analysis, interpretation, and explanation. The Minor also gives an opportunity for students to choose modules and develop their own interests in language or literature. Students who follow the Minor will have an enhanced understanding of the nature of the English language and literature and also of the tools needed for further independent exploration of literary and linguistic phenomena.

Courses & Units Required 5 courses (min) 15 units (min)

Core Courses

Course Number Course Title L P U

GS F241	Creative Writing	2 1 3
HSS F337	English Literary Forms and Movements	3 0 3
Electives Pool – I (Language)	GS F221 Business Communication	3 0 3
GS F244	Reporting and Writing for Media	3 0 3
IV-107	Minor in English Studies	GS F245
Effective Public Speaking	3 0 3	
HSS F222	Linguistics	3 0 3
HSS F227	Cross Cultural Skills	3 0 3
HSS F228	Phonetics and Spoken English	3 0 3
HSS F342	Advanced Communicative English	3 0 3
3 Elective Pool-II (Literature)	GS F242 Cultural Studies	3 0 3
GS F322	Critical Analysis of Literature and Cinema	3 0 3
HSS F221	Readings from Drama	3 0 3
HSS F226	Postmodernism	3 0 3
HSS F237	Contemporary Indian English Fiction	3 0 3
HSS F316	Popular Literature and Culture of South Asia	3 0 3
HSS F327	Contemporary Drama	3 0 3
HSS F330	Appreciation of Art	3 0 3
HSS F332	Cinematic Arts	3 0 3
HSS F335	Literary Criticism	3 0 3
HSS F336	Modern Fiction	3 0 3
HSS F338	Comparative Indian Literature	3 0 3
HSS F340	Postcolonial Literatures	3 0 3
HSS F349	Ecocriticism	3 0 3
HSS F373	Shakespeare and Popular Culture	3 0 3
HSS F399	Introduction to American Literature	3 0 3

Minor in Entrepreneurship Description Entrepreneurship has tremendous impact on development of economy as well as society addressing various market & societal problems through continuous value creation in terms of innovations and job creation. The minor in entrepreneurship aims to equip students from

different disciplines with better understanding of entrepreneurial process, necessary skills and experience to translate ideas into real innovative products/services to new entrepreneurial ventures. In this programme, hands-on experiential learning is emphasized giving students an opportunity to learn in a team environment, design innovative products/services and create their own businesses. This will motivate students to pursue entrepreneurship as their career choice.

Courses & Units Required 5 courses (min) 15 units (min)

Core Courses	Course Number	Course Title	L P U
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BITS F468	New Venture Creation	3 0 3	
BITS F482 or ECON F414	Creating and Leading Entrepreneurial Organizations	3 0 3	ECON
F212 Fundamentals of Finance and Accounting	3 0 3		
Electives (minimum of 2 courses and additional units required to make the total to 15)			
BITS F322 Venture Team Development and Organization	3 0 3		
BITS F323 Venture Finance	3 0 3		
BITS F324 Strategy for Entrepreneurs	3 0 3		
BITS F325 New Product and Service Design	3 0 3		
BITS F326 Design Thinking for Innovation & Entrepreneurship	3 0 3		
BITS F427 Digital Marketing	3 0 3		

IV-108 Minor in Film and Media Description Film and its derivative forms of media such as television and advertising are dominant cultural forces in the contemporary world. The minor in Film and Media aims to provide:

- i. An introduction to media studies with a specific focus on film studies
- ii. A basic introduction to Print and Digital Media including film making and film appreciation
- iii. Hands-on training in writing for media and film production

Courses & Units Required 6 courses (min) 18 units (min)

Core Courses	Course number	Course Title	L P U
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GS F223	Introduction to Mass Communication	3 0 3	GS
F244 Reporting and Writing for Media	3 0 3		
GS F322 Critical Analysis of Literature and Cinema	3 0 3		
Elective Courses	GS F224	Print and Audio Visual Advertising	3 0 3
GS F242 Cultural Studies	3 0 3		
GS F321 Mass Media Content and Design	3 0 3		
GS F343 Short Film and Video Production	3 0 3		
HSS F332 Cinematic Arts	3 0 3		

Minor in Finance Description The minor in Finance aims at providing the student a grounding in the basic concepts of accounting and finance so as to complement their existing disciplinary knowledge, enrich their educational experience, enable them to make better financial decisions, and expand their career opportunities. It will also give students an opportunity to learn more about investments and quantitative applications in finance.

Courses & Units Required 5 courses (min) 15 units (min)

Core Courses	Course Number	Course Title	L P U
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ECON F212	Fundamentals of Finance and Accounting	3 0 3	FIN F315
Financial Management	3 0 3		
Elective Courses	ECON F241	Econometric methods	3 0 3
ECON F312	Money banking and Financial markets	3 0 3	ECON F355
	Business Analysis & Valuation	3 0 3	
ECON F411	Project Appraisal	3 0 3	ECON F413
	Financial Engineering	3 0 3	FIN F242
	Introduction to Financial Mathematics	3 0 3	FIN F243
	Functions & Working of Stock Exchanges	3 0 3	FIN F311
	Derivatives & Risk Management	3 0 3	FIN F312
	Fundamentals of Taxation and Audit	3 0 3	FIN F313
	Security Analysis & Portfolio Management	3 0 3	FIN F314
	Investment Banking & Financial Services	3 0 3	FIN F414
	Financial Risk Analytics and Management	3 0 3	

IV-109 Minor in Management Description "Minor in Management" is designed for the student who wants a general introduction to the functioning of a business and develops a business acumen. By gaining an understanding of the areas of management, the student will have a competitive advantage in the marketplace and throughout their

career. The student shall be better equipped to handle their projects in practice school by understanding organizational and managerial issues. It would also enable him/her to combine their technical and managerial skills and explore the field of business consulting, role of management trainees, etc. Those interested in pursuing an MBA would get an opportunity to explore the management field and assess its fit with their career interest.

Courses & Units Required 05 courses (min) 15 units (min) Core Courses Course Number Course Title L P U BITS F428 Essentials of Strategic Management 3 0 3 MGTS F211 Principles of Management 3 0 3 MGTS F314 Essentials of Financial Management 3 0 3 Electives BITS F326 Design Thinking for Innovation and Entrepreneurship 3 0 3 BITS F330 Negotiation Skills and Techniques 3\* ECON F415 New Venture Creation 3 0 3 ECON F434 International Business 3 0 3 ECON F435 Marketing Research 3 0 3 HSS F328 Human Resources Development 3 0 3 MF F219 Operations Management 3 0 3 MF F319 Supply Chain Management 3 0 3 ME F443 Quality Control, Assurance and Reliability 3 0 3 MGTS F311 Marketing 3 0 3 MGTS F313 Product and Brand Management 3 0 3 MGTS F315 Foundations of Business Analytics 3 0 3 MGTS F316 Managerial and Leadership Skills 3 0 3 MGTS F351 Organizational Behaviour 3 0 3 Minor in Materials Science and Engineering Description Materials Science and Engineering is an interdisciplinary subject that makes use of knowledge from Physics, Chemistry, Engineering, Mathematics, Biology and Biotechnology, but which has its own special character. It is always evolving – new and exciting materials such as nanomaterials, high-temperature and lightweight materials, green materials and sustainable biomaterials for tissue engineering are continually emerging. The field of Material Science combines a wide knowledge base and puts it to diverse practical and commercial use.

Courses & Units Required 5 courses (min) 15 units (min) Core Courses Course Number Course Title L P U CHE F243 / ME F213 Materials Science and Engineering 3 2 0 0 3 2 MST F331 Materials Characterization 3 1 4 MST F332 Materials Processing 3 0 3 Elective Courses BITS F416 Introduction to Nanoscience 3 0 3 CHE F433 Corrosion Engineering 3 0 3 CHEM F223 Colloid and Surface Chemistry 3 0 3 CHEM F326 Solid State Chemistry 3 0 3 CHEM F336 Nanochemistry 3 1 4 ME F452 Composite Materials and Design 3 0 3 MST F333 Introduction to Biomaterials 3 0 3 MST F334 Materials for Catalytic Applications 3 0 3 MST F335 Coating and thin film technology 3 0 3 MST F336 Glass Technology 3 0 3 MST F337 Materials for Energy Applications 3 0 3 MST F338 Metals and Alloys 3 0 3 MST F339 Polymer Materials 3 0 3 PHY F379 Thin Film Technology 3 0 3 PHY F414 Physics of Advanced Materials 3 1 4 PHY F416 Soft condensed Matter Physics 3 1 4 IV-110 Minor in Nanoscience and Nanobiotechnology Description Nanoscience and nanotechnology a cutting edge branch of science and engineering in which we understand the control of the formation of structures and materials on scales ranging from the atomic to the nanometer, their unique properties due to their nanostructures, and their applications in myriad fields including, alternative energy, energy storage and conversion, electronic devices, sensors, catalysis, medical diagnostics, therapeutics etc. This interdisciplinary subject makes use of knowledge from Physics, Chemistry, Engineering, Biology, Biotechnology, etc. This Minor program in “Nanoscience and Nanobiotechnology” will provide the students deep understanding of

nanostructured materials including their synthesis, characterizations, properties, and applications. Courses & Units Required 05 courses (min) 15 units (min) Core Courses Course Number Course Title L P U BIOT F422 Nanobiotechnology 3 0 3 BITS F416 Introduction to Nanoscience 3 1 4 CHE F243/ME F216 / MF F216 Material Science and Engineering 3 2 0 1 3 3 Electives (Any Two) BIO F417 Biomolecular Modelling 3 0 3 CHEM F223 Colloid and Surface Chemistry 3 0 3 CHEM F327 Electrochemistry: Fundamentals and Applications 3 0 3 CHEM F328 Supramolecular Chemistry 3 0 3 CHEM F333 Chemistry of Materials 3 0 3 CHEM F336 Nanochemistry 3 1 4 CHEM F414 Bio and Chemical Sensors 3 0 3 MST F333 Introduction to Biomaterials 3 0 3 Minor in Philosophy, Economics, and Politics Description The minor in Philosophy, Economics & Politics & (PEP) aims at introducing students to a wide range of approaches to understand the social and human world we live in and to develop skills useful for a range of career opportunities in national and international organizations. It would particularly interest and enthuse those students who wish to complement their core expertise in science and engineering with a good grasp of the humanities and social sciences. As a multi-disciplinary minor, this option will provide a judicious mix of knowledge in social sciences (economics, sociology and politics) and the humanities (philosophy) that would enable students to draw connections among political, economic, and social phenomena as well as equip them with the necessary skills to think through complex challenges of our society in a creative and critical manner. Courses & Units Required 6 courses (min) 18 units (min) Core Courses Course Number Course Title L P U ECON F211 Principles of Economics 3 0 3 GS F211 Modern Political Concepts 3 0 3 HSS F235 Introductory Philosophy 3 0 3 Elective Courses BITS F 385 Introduction to Gender Studies 3 0 3 GS F231 Dynamics of Social Change 3 0 3 GS F234 Development Economics 3 0 3 GS F243 Current Affairs 3 0 3 GS F312 Applied Philosophy 3 0 3 GS F313 Marxian Thoughts 3 0 3 GS F332 Contemporary India 3 0 3 GS F333 Public Administration 3 0 3 HSS F232 Introduction to Development Studies 3 0 3 HSS F236 Symbolic Logic 3 0 3 HSS F315 Society, Business, and Politics 3 0 3 HSS F322 Social and Political Ecology 3 0 3 HSS F331 Sankara's Thoughts 3 0 3 HSS F333 Comparative Religion 3 0 3 HSS F343 Professional Ethics 3 0 3 HSS F345 Gandhian Thoughts 3 0 3 HSS F346 International Relations 3 0 3 IV-111 Minor in Philosophy, Economics, and Politics HSS F350 Human Rights: History, Theory and Practice 3 0 3 HSS F353 Philosophy of Aesthetics 3 0 3 HSS F354 Introduction to Islamic Economy 3 0 3 HSS F355 Dictatorship, Democracy & Development 3 0 3 HSS F356 Social Movements and Protest Politics 3 0 3 Minor in Physics Description The theories in physics are all-pervading and their applications are found in varied branches of engineering and sciences. The minor in Physics aims to introduce the student to fundamental theories in physics. The core courses cover the basics and by choosing from the large pool of electives, the student will be able to pursue to a deeper level the areas of her/his interest. This minor would equip the students with the skill and knowledge which will help them in gaining insights in their own primary area of study. Courses & Units Required 5 courses (min) 15 units (min) Core Courses Course Number Course Title L P U PHY F212 or ECE F212/ EEE F212/ INSTR F212 Electromagnetic Theory – 1 or Electromagnetic Theory 3 0 3 PHY F242 Quantum Mechanics – 1 3 0 3 PHY F312 Statistical

Mechanics 3 0 3 Elective Courses BITS F316 Nonlinear Dynamics and Chaos 3 0 3 BITS F386 Quantum Information and Computing 3 0 3 PHY F211 Classical Mechanics 3 1 4 PHY F213 Optics 3 0 3 PHY F214 Electricity Magnetism and Optics Lab 0 2 2 PHY F215 Introduction to Astronomy and Astrophysics 3 0 3 PHY F241 Electromagnetic Theory – 2 3 1 4 PHY F243 Mathematical Method of Physics 3 0 3 PHY F244 Modern Physics Lab 0 2 2 PHY F311 Quantum Mechanics – 2 3 0 3 PHY F313 Computational Physics 3 0 3 PHY F315 Theory of Relativity 3 0 3 PHY F318 Atoms and Photons 3 0 3 PHY F341 Solid State Physics 3 0 3 PHY F342 Atomic and Molecular Physics 3 0 3 PHY F343 Nuclear and Particle Physics 3 0 3 PHY F346 Laser Science and Technology 3 0 3 PHY F418 Lasers and Applications 3 1 4 PHY F426 Physics of Semiconductors Devices 3 1 4 PHY F427 Atmospheric Physics 3 0 3 PHY F428 Quantum Information Theory 3 0 3 PHY F434 Foundations of Quantum Mechanics 3 0 3 Minor in Public Policy Description The Minor in Public Policy aims at providing the students a clear and contextualised understanding of conceptual and empirical aspects of public policy, the nature of public policy interventions in India and their varying impacts. Also, it intends to provide the students an understanding of the dynamics of policymaking, central aspects of governance and core features and functions of institutions, and equip them with skills of policy analysis. Courses & Units Required 5 courses (min) 15 units (min) Core Courses Course Number Course Title L P U GS F233 Public Policy 3 0 3 GS F333 Public Administration 3 0 3 Elective Courses HSS F232 Introduction to Development Studies 3 0 3 HSS F317 Introduction to Globalisation 3 0 3 HSS F322 Social and Political Ecology 3 0 3 HSS F361 Urban Policy and Governance 3 0 3 IV-112 HSS F362 Local Governance and Participation 3 0 3 HSS F363 Disaster and Development 3 0 3 Minor in Quantum Information and Technologies Description Quantum Information Technology is a current area of interest the world over, throwing up many opportunities for employment in industry, start-ups and pure research. Equipping undergraduates with the basic tools and introducing them to the language of this area is of prime importance in today's age. Especially in light of the National Mission on Quantum Technologies and competition from other premier institutions in India, it is imperative that BITS play an important role in training manpower for the second quantum revolution. This program will definitely serve Physics and Engineering students in enhancing their knowledge and skills in this current area. Courses & Units Required 05 courses (min) 15 units (min) Core Courses Course Number Course Title L P U BITS F386 Quantum Information and Computations 3 0 3 Electives BITS F463 Cryptography 3 0 3 BITS F464 Machine Learning 3 0 3 CS F316 Quantum Architecture and Programming 3 0 3 PHY F242 OR PHY F345 OR CHEM F213 Quantum Mechanics I OR Quantum Mechanics for Engineers OR Physical Chemistry II 3 3 3 0 0 0 3 3 3 PHY F420 OR PHY F318 Quantum Optics OR Atoms and Photons 3 3 1 0 4 3 PHY F428 Quantum Information Theory 3 0 3 PHY F434 Foundations of Quantum Mechanics 3 0 3 Minor in Robotics and Automation Description This minor aims to impart specialized knowledge and skills in robotics and automation required by engineers to the current demands of various industrial sectors. Automobile, aerospace & defense, logistics engineering and factory automation companies are currently asking for engineering graduates with add-on skills in these areas. Feedback has established that several sectors of

industry need the newly recruited employees with knowledge and skills in 'automation', 'robotics', and 'mechatronics'. Currently, the need of core courses of any B.E. programme of the Institute limits sufficient coverage of these topics in the existing core and hence the only way students can complement their learning with these specialized courses is through a minor programme. This minor programme has been designed by keeping that need in focus. This minor programme consists of a fairly generic core so as to be relevant to students of any discipline and a broad set of elective courses covering application of the fundamentals of robotics and automation to various industry sectors.

Courses & Units Required 05 courses  
(min) 15 units (min) Core Courses Course Number Course Title L P U

BITS F441	Robotics	3	0	3
EEE/INSTR/ECE F242	Control Systems	3	0	3
BITS F327	Artificial Intelligence for Robotics	2	1	3
Electives BITS F312	Neural Network & Fuzzy Logic	3	0	3
BITS F415	Introduction To MEMS	3	1	
4 BITS F442	Remote Sensing and Image Processing	3	0	3
BITS F451	Autonomous Mobile Robotics	3	0	3
BITS F464	Machine Learning	3	0	3
ECE F434	Digital Signal Processing	3	1	4
EEE F411	Internet of Things (IoT)	3	1	4
EEE F422	Modern Control Systems	3	0	3
EEE G512	Embedded System Design	3	1	4
INSTR F343	Industrial Instrumentation and Control	3	0	3
INSTR G611	Advanced Control Systems	3	2	5
ME F221	or Mechanisms and Machines	3	0	3
IV-113 Minor in Robotics and Automation	MF F221 ME F426	Industry 4.0 in Manufacturing	3	0
3 ME F432	Computer Aided Manufacturing	2	1	3
MF F311	Mechatronics & Automation	2	1	3
MSE G511	Mechatronics	3	2	5
Minor in Semiconductor Devices and Technology Description				

As the need for semiconductor chips increases globally, there will be a greater need for engineers who specialize in semiconductor-device and circuit design. There is a huge investment by government as well as the leading semiconductor industries to set up semiconductor manufacturing units across the globe. Hence, there is an urgent need to train manpower in this specialized field. The minor will also lay foundation for the more complex design level (both analog and digital) thinking thereby expanding the scope and expertise of the student and making them ready for the competitive job market. Further, the minor will also introduce the component of semiconductor manufacturing, which is totally aligned with the government National Semiconductor Mission.

Courses & Units Required 05 courses  
(min) 15 units (min) Core Courses Course Number Course Title L P U

EEE F437				
Semiconductor Fabrication Technology	3	1	4	EEE/ECE/INSTR/ECOM
BITS F214	Electronic Devices	3	0	3
Electives BITS F415	Introduction to MEMS	3	1	4
EEE/ECE/INSTR F216	Electronic Devices Simulation Laboratory	0	2	2
F423	Electronic Material Design and Simulation Laboratory	1	2	3
EEE F477	Modelling of Field-Effect Nano Devices	3	0	3
EEE G595				
Nanoelectronics and Nanophotonics	5 MEL G514	Nanoelectronic Memories and Technology	3	2
MST F331	Material Characterization	3	1	4
PHY F341	Solid State Physics	3	0	3
PHY F379				
Thin Film Technology	3	0	3	Minor in Supply Chain Analytics Description
Supply chain analytics help organizations to take better, faster and more informed decisions about their business operations. The global market for supply chain analytics is projected to exceed \$10 billion by 2025 and has a compound annual growth rate (CAGR) of 16%. Today's supply chain analytics solutions already have impressive capabilities, and with future advancements will only become more of a game-changer for businesses across all industries.	Supply chain			

analytics minor programme will enable the students to develop foundations and to broaden their knowledge base of supply chain in general and supply chain analytics in specific. It will cover three verticals such as supply chain management, supply chain modelling and empirical analysis (qualitative data analysis) & supply chain analytics (quantitative data analysis). The minor programme is designed to create supply chain professionals for present and future business environment.

Courses & Units Required 05 courses (min) 15 units (min)

Core Courses Course Number Course Title L P U BITS F455 Analytics for Supply Chain 3 0 3  
MF F319 Supply Chain Management 3 0 3 MF F422 Supply Chain Modelling and Empirical Analysis 3 1 4 Electives ME F443 Quality Control Assurance and Reliability 3 0 3 MF F321 Procurement Management 3 0 3 MF F418 Lean Manufacturing 3 0 3 MF F485 Sustainable Manufacturing 3 0 3 MATH F212 OR ME F320 OR MF F320 Optimization OR Engineering Optimization OR Engineering Optimization 3 0 3 MATH F242 Operations Research 3 0 3  
MATH F353 Statistical Inference and Applications 3 0 3 IV-114 Minor in Water and Sanitation Description Sustainable Development Goal 6 (SDG 6) focusses on Water and Sanitation and the tasks mentioned in SDG 6. Sanitation is also high on agenda of the Indian Government as evident from Swachh Bharat Mission. Trained Postgraduate and working professionals are of high demand. Bill and Melinda Gates foundation had significantly invested in Water, Sanitation and Hygiene programme and they had funded UNESCO IHE and its 8 partners in developing e learning alliance. The foundation's investment strategy in sanitation requires qualified and trained professionals. This minor would equip the students with the skill and knowledge which will help them in gaining insights in the area of water and sanitation.

Courses & Units Required 05 courses (min) 15 units (min)

Core Courses Course Number Course Title L P U BIO F216 Water Sanitation and Solid Waste Management 3 0 3 BIO F217 Laboratory for Water Sanitation and Solid Waste management 1 2 3 Electives BIO F266 Study Project 3 SAN G511 Sanitation Technology 3 2 5 SAN G512 Sanitation and Public Health 3 2 5 SAN G513 Sanitation Governance Behaviour change and Advocacy 5\* SAN G514 Sanitation Finance and Project Management 5\* SAN G515 Emergency Sanitation & Leadership 5\*

Minor in Tissue Engineering Description Tissue Engineering is an upcoming field which required interdisciplinary knowledge of Engineering as well as Biological Sciences (specially Tissue Culture). The objective is to train students to do research and innovate to repair damaged tissues or produce organs or tissues for replacement in damaged patients. Its basically a field of Biomedical Engineering wherein skill sets of Cell & Tissue Culture, Materials Sciences and Engineering skills in terms of Mechanical or Chemical Engineering is required to develop or repair damaged tissues or organs.

Courses & Units Required 05 courses (min) 15 units (min)

Core Courses Course Number Course Title L P U BIO F352 Cell and Tissue Culture Technology 3 1 4 BIO F422 Fundamentals of Tissue Engineering 2 1 3 MST F333 Introduction to Biomaterials 3 0 3 Electives BITS F417 or ME F423 Microfluidics and Its Application or Microfluidics and Its Application 3 0 3 4\* BITS F418 Introduction to Biomedical Engineering 3 1 4 BIOT F422 Nanobiotechnology 3 0 3 BIO F311 Recombinant DNA Technology 3 0 3 CHE F414 Transport Phenomena 3 0 3 CHE F421 Biochemical Engineering 3 0 3 DE G513 Tribiology 3 2 5 ME F211 Mechanics of Solids 3 0 3 ME F216 Materials Science &

Engineering 2 1 3 ME F452 Composite Materials and Design 3 0 3

Contents Section 1. General 2. Some Structural Features 3. Registration 4. Teaching and

Evaluation 5. Minimum Academic Requirements 6. Some Special Courses and Programmes 7. Flexibilities 8. Additional Clauses for Ph.D. Programme 9. Graduation and Eligibility for all Degrees 10. Additional Regulations for Off-Campus, Distance Learning and Collaborative Programmes 11. Linkages with Earlier Regulations 12. Follow-Through Actions 13. Revision First Printing Eleventh Printing, updated Twelfth Printing, updated Thirteenth Printing, updated Fourteenth Printing, updated Fifteenth Printing, updated Sixteenth Printing, updated Seventeenth Printing, updated Eighteenth Printing, updated September 1981 July 2000 June 2001 July 2002 July 2004 July 2008 July 2010 March 2015 March 2023 Page no. 1 6 10 20 27 31 36 44 55 56 60 61 65 1 ACADEMIC REGULATIONS 1. General The educational programmes of the Birla Institute of Technology & Science, Pilani (BITS Pilani), hereinafter referred as the Institute are conducted on-campus at any of its campuses as well as off-campus at various collaborating organisations. The programmes for which instructions, except Practice School/Thesis/Seminar/ Dissertation, are given on campus at Pilani, Dubai, Goa or Hyderabad are classified as “on-campus” programmes. The “off-campus” programmes are either structured collaborative programmes conducted at collaborating organisations or are work integrated learning programmes without structured collaborative programmes. These regulations govern “on-campus” as well as “off-campus work integrated learning and collaborative” programmes (hereafter referred to as “off campus” programmes), unless specifically stated otherwise. Every academic year shall be divided into two regular semesters known as the first semester and the second semester. The maximum number of units, a first degree student can register is twenty-five, a higher degree student can register is twenty, excluding deficiency/Audit course(s). [for unit see Section 1.05]. Number of deficiency/Audit course(s) for a higher degree student may not exceed 2 in a semester. For certain higher degree programmes the maximum units/semester can slightly differ. For example, a student of MBA in Business Analytics programme can register twenty one units in a semester. The programme of studies leading to a degree consists of prescribed courses sequentially distributed over the required number of semesters. Whenever summer months are used, either for academic or for administrative purposes, recourse is always to be taken through what is known as Summer Term. Summer term normally consists of eight weeks, provides for a special accelerated pace and requires that the number of courses in which any student is permitted to register cannot be more than three (subject to availability), provided the total number of units is not more than 10 unless the semester wise pattern differs. Nevertheless, certain courses like Practice School II, Thesis/Seminar, and Dissertation in the first and second tiers, and other courses specifically so mentioned in the Bulletin cannot, by their very nature, be offered as a single entity in an accelerated pace during the summer term. However, a student who has already completed his/her entire normal duration of the programme and is left with only the First Degree Thesis as a backlog and eligible for graduation after the completion of 9 units of thesis, then he/she may be offered the 9 units thesis during the summer term as an exceptional case subject to the recommendation of the Departmental Committee on Academics (DCA) and approval by the Dean, AUGS. Please see Clause 6.16(d) for graduation requirements. Also, refer Clause 7.05

for further details about the summer term. While each programme has a normal duration indicated either in the Institute Bulletin or prescribed by an appropriate authority, the eligibility for a degree is always determined on the basis of number of courses and units completed. While the regulations stipulate certain minimum number of units for each programme, for actual requirement of any programme the Bulletin/appropriate committee has to be consulted. The minimum stipulated number of units for various degree programmes are given below: 1.00 1.01 1.02 1.03 1.04 2 B.Sc. (Off Campus programmes) 105 Integrated First Degree 144 Higher Degree M.E./M.Pharm. 64 M.S./M.P.H. 60 MBA 88 MBA in Business Analytics (On Campus Programme) 76 M.Phil. 50 Ph.D.(Thesis) 40 M.Tech./MBA (Off-Campus Programmes) 64 M.Sc. (Off-Campus Programmes) (for normal input of 3 year Undergraduate degree) 72 The stipulated minimum number of units for Post Graduate Diploma (Off Campus) is 28 units. 1.04a A unit (Academic credits) is a convenient device to anticipate the number of hours per week of total effort including the class work of a student, as the system recognises only the formal contact hours in the class room and laboratory as a means for sustained self study. While the structuring of the courses in terms of classroom hours, lab. hours etc. is done through the timetable each semester/term, the total hours of work for each unit is approximately three hours per week. In the case of Ph.D. thesis, whatever may be the number of units for which a student registers, the student has to devote all the available time for the thesis work. The semester wise programme consists of a prescribed set of courses described in the Bulletin, adding to a certain total number of units in each semester, for an anticipated normal progress through the programme. This number is called the normal load for that semester for that programme. Normal load is a mere reference point for construction of a programme and would carry no other significance in these regulations. 1.05 The academic objectives of a programme require a proper sequencing of not only individual courses but also of a cluster of courses. For each programme, the Semester wise pattern presented in the Bulletin conveys a sense of what comes first and what comes later. Nonetheless particular attention is required in respect of local points of monitoring; namely: (a) prerequisite of an individual course (see 3.13) and (b) the prior preparation before registering in an individual course or a group of courses (see 3.14 & 3.15). 1.06 These regulations demand of the system certain operations which have to take place during pendency of a student's progress through the programme. These are: monitoring the pace of his/her progress (see 5.02), amendment/revision of the original registration in each semester (see 3.26 & 3.27), registration of students who depart from the normal pace (see 3.25), etc. These can be done only with reference to a 'prescribed programme'. The prescribed programme is defined as the whole series of courses required of students that unfold as a package of courses in the requisite number of semesters. The prescribed semester courses are those courses which appear in each of the above unfolding of successive semesters. 1.07 Whenever these regulations and the Bulletin provide for policies, regulations, or operations governing the programmes to be worked out, an Academic Governing Committee (AGC) will work out the same within the broad guidelines given. The Academic Governing Committee will consist of Dean, Academic-Under Graduate

Studies (AUGS), Dean, Academic- Graduate Studies and Research (AGSR), Dean, Practice School (PS), Dean, Work Integrated Learning Programmes (WILP), Associate Dean, AUGS from each campus, Associate Dean, AGSR from each campus and Professor-in 1.08 3 charge, BITS Entrance Examinations. The Convenorship of the Committee will rotate amongst these members depending on the item to be discussed. The Committee may form sub-committees to address specific academic matters either as standing committees or on an ad-hoc basis. The Committee may also co-opt any other member of the faculty for discussion on any particular topic. Generally the details to be worked out would be related to admission with advance standing, admission with marginal deficiency, dual degree programmes, transfer operations etc. All academic matters regarding - first degree or higher degree programmes including the curriculum, listing or categorization of courses, pre-requisites of courses, are to be worked out by the cross-campus Departmental Committee on Academics (ccDCA) of the respective Department(s). They may approach the Dean AUGS / Dean AGSR/Dean WILP for approval by the Senate. All other operational matters regarding a student's access to certain courses, exemptions/deviation from a student's prescribed path to graduation, etc. may be worked out by the Departmental Committee on Academics (DCA) of the respective Department. To resolve any inter departmental or institute level issues, the proposal submitted by ccDCA may be referred to Academic Governing Committee (AGC) through Dean AUGS / Dean AGSR/Dean WILP before submitting it to the Senate for approval. A committee known as the Doctoral Counselling Committee (DCC), will look after the academic/operational details and also perform certain specific function in respect of Ph.D. students. The committee will consist of Dean, AGSR (Convener), Dean, Sponsored Research and Consulting, Dean, AUGS, Associate Deans AGSR of each campus, one faculty member from each campus to be nominated by the Senate for a period of two years. For the anticipated normal population, the prescribed programme is the semester wise pattern as described in the Bulletin. For various categories of students who use the flexibilities of the system (see section 7) the prescribed programme is given to him/her at the time of commencement of the flexibility. For students who are permitted by these regulations to follow a pace other than normal, appropriate clauses are to be consulted. It cannot be overemphasized that the sequence of courses, semester after semester, should be followed in the order presented in the Bulletin. Whenever it is detected that this order has been upset and at a certain point of reckoning a backlog of courses (see 3.25) has accumulated, timely correction is imperative in order for the student to quickly fall into the line of orderly progress in the programme. In the absence of this correction, the student may suffer from an illusion of progress; He/she might have to pay dearly in terms of total time spent on his/her programme and the total academic objective of sequencing might also be permanently vitiated. These regulations, therefore, prescribe procedures by which making up for the backlog can be done simultaneously with a controlled forward movement on a course-by-course basis. When the student is unable to respond to this task and his/her backlog becomes large, he/she comes under the purview of Academic Counselling Board (ACB) (see 5.03). \*Note: Any reference to Dean, AUGS/AGSR within this document implies

that for operations and policy implementation the Dean will be approached through the Associate Dean, AUGS/AGSR of the respective campuses. 1.08a 1.08b 1.09 1.10 4 1.11 To operate a system providing certain flexibilities within broad boundary limits, these regulations ensure supervision and monitoring at some key points. One such key point is the beginning of every semester when the student has to go through the requirement known as the registration procedure to work out his/her programme for the semester. No student is permitted to attend classes, without completing the appropriate registration procedure. Another key point is the end of the semester when the student's performance in each course is pronounced in terms of letter grades or non-letter grades or reports (see 4.11 & 4.12). The letter grades have points associated with them in a quantified hierarchy, whereas the non-letter grades describe a qualitative hierarchy. The reports are not to be misconstrued as grades. All such grades and reports and other pertinent information for a semester are given in a grade sheet (see 4.22). Chronologically organised information from the grade sheets of a student with the necessary explanation constitutes his/her transcript which is issued at the time he/she leaves the Institute or at an intermediate point on request. The grade sheet also contains the Cumulative Grade Point Average (CGPA). It is an overall performance as calculated by the method described in clause 4.21. It is also used for the declaration of division as per clause 9.04 when the programme/composite programme is completed. While registration with the approval of the appropriate authority consistent with these regulations is a token of permission to pursue studies, the grade sheet is a complete record of the outcome of what was intended in the original/amended/ revised registration. The various grades and reports in clauses 4.11 & 4.12 would be appropriately used to tally the grade sheet with the original/ amended/revised registration. It would be evident that this tally between what was registered for and what was obtained in terms of grades and reports will apply to all courses except for any course which was originally registered for but subsequently replaced by another course through substitution. The tally is made on a course-by-course basis at the conclusion of the semester to determine which of the courses have been cleared. A course is deemed to have been cleared if the student obtains a grade in the course. However, mere clearing of the prescribed courses on a course by course basis is not tantamount to fulfilling the requirements of graduation, for which see clauses 9.01 and 9.02. Every registration in a semester in a course must terminate in an outcome which is a grade earned or report given. The completion of this linkage is defined as performance in the course for the semester. In a future performance in a course that has been already cleared, the status of clearing of the course would be determined by the latest performance. The consequence of obtaining a grade which is inadequate to fulfil the prerequisite conditions of a later course should be seen in clause 3.13. The consequences of the various reports are described in clauses 4.13 to 4.20 with well-defined subsequent courses of action. Thus a course cleared and subsequently subjected to multiple registration may lose the status of clearing at a point of reckoning. These regulations do not stipulate a minimum percentage of attendance before a student is permitted to appear in any test/examination. But the Institute being a fully residential university with internal and continuous evaluation

system, these 1.12 1.13 1.14 1.15 1.16 1.17 5 regulations clearly expect every student to be responsible for regularity of his/her attendance in class rooms and laboratories, to appear in scheduled tests and examinations and fulfil all other tasks assigned to him/her in every course. The system has adequate resilience to accommodate unforeseen situations through withdrawal, make-up, feedback from examinations and interaction with teachers. When in spite of all these facilities a student fails to cooperate with the teacher in the discharge of his/her part of the contract to such an extent that the teacher is unable to award any grade, the teacher is authorised by these regulations to give a 'Not Cleared' (NC) report (see 4.19). The teacher concerned in a course or associated with a course is defined, for the purpose of these regulations, as Instructor or Instructor-in-charge (see 4.02). A student who is duly registered in a semester or has been permitted, after registration, to withdraw from the semester or has been given prior permission to stay away from the Institute for the semester or has been asked to stay away is considered to be on the rolls of the Institute for that semester. While such a student retains the nominal advantage of being on the rolls of the Institute the loss of time from studies and its consequences cannot be helped by the Institute. If for any valid reason a student is unable to register in a semester, he/she must seek prior permission from the Dean AUGS\* (for on campus first degree programmes) or Dean AGSR\* (for on campus higher degree programmes) or Dean WILP (for off campus programmes) to drop the semester. If such permission has not been requested or after a request, the permission has been denied, the student will be treated under clause 1.21 whereby his/her name would be struck off the rolls of the Institute. Any appropriate Board/Committee of the Institute authorised by senate, such as Academic Counselling Board (ACB), Examination Committee (EC), Disciplinary Committee (DC) may require a student to stay away from the Institute for a semester or more when the authority is satisfied that by doing so the student will improve his/her overall progress, performance and conduct after he/she comes back. When a student who has been permitted to stay away from the Institute for a semester or more comes back, his/her subsequent programme would be normally governed by the current academic structure and regulations. He/she cannot, ipso facto, claim to be governed by his/her earlier academic structure and regulations if in the meantime these have changed. When a student fails to register in a semester without any prior permission to stay away, his/her name would be struck off the rolls of the Institute and he/she would no longer be a student of the Institute. His/her case will be automatically processed and the file will be closed. If, however, such a person, after his/her name has been struck off the rolls of the Institute, is permitted to come back, his/her case can be treated as in Clause 1.20 above with the proviso that all his/her previous records as a former student are revived under the current structure, regulations and schedule of fees. These regulations incorporate many unusual flexibilities to allow innovations in education, and can accommodate many worthy educational goals. These flexibilities should, however, not be misconstrued to accommodate highly personalised ambitions inconsistent with these goals. Although they are available, it should be 1.18 1.19 1.20 1.21 1.22 6 understood that they are not for the asking; they are awarded on a competitive basis and there are always limits to

the total quantum of flexibilities. No application of these regulations will automatically entitle a student to any refund of fees except what is validated by the schedule of fees in force from time to time. On the other hand, certain implementation of these flexibilities may require additional fees. The Institute may enter into collaboration with other universities whereby students of those universities register courses within the framework of these regulations according to mutually agreed guidelines. Such students will be known as External Students. Reciprocally, BITS students may be permitted to register courses in collaborating universities on a transfer of credit basis. These regulations will apply uniformly to all on-campus and off-campus programmes except where otherwise indicated (see clause 1.00). Some additional regulations for off-campus programmes are given in Section 10. 2. Some Structural Features The education at BITS is in three levels, called tiers, the first tier being the integrated first degrees, the second being the higher degrees and the third being the Ph.D. degree. The academic structure in each of these tiers is unfolded by various components in a semester wise pattern. First Tier A reference to the Bulletin will show that various programmes are bunched in different Groups. Without going into the details it is necessary to touch upon the subject to obtain a better understanding of the regulatory process controlled by these regulations in respect of operation within such Groups and across them. There may be some restrictions from time to time in terms of flexibilities like transfer or dual degree concerning the degree programmes within the groups and among the groups. This will be notified in the bulletin as per periodic decision of the Senate. All operational matters concerning this will be controlled by Academic Governing Committee (AGC). The various courses prescribed for a programme of study may be categorised in terms of their academic affinity or their functional objectives. Depending on the overall educational goals of programmes, it is possible to have fixed named courses in a particular category, to have a fixed number of electives; to have a range of named courses in a particular category, to have a number of electives within a range. Named courses are those indicated by course number and the course title in the semester-wise pattern prescribed for a programme. For first degree students, the named courses include all mandatory courses under the General Institutional Requirement and the Discipline-specific Core courses for the program(s). The Elective courses fall under three categories: Discipline Electives, Humanities Electives, and Open Electives. Open Electives enable students to pursue courses that are not part of the discipline requirement nor 1.23 1.24 1.25 2.01 2.02 2.03 2.04 2.05 7 part of the Humanities requirement. Normally any elective course will be treated as an Open Elective once the student's requirements under Discipline Electives and Humanities Electives have been accounted for. Open elective requirement of Dual degree students is met by counting the Discipline electives of one degree as Open Electives of the other degree. A first degree student may also choose, where permitted, upto a certain prescribed maximum of his/her elective courses from the offerings in the second tier (i.e. higher degree), subject to the approval by the DCA (see clause 1.08(a)) and the prerequisite requirements and clause 3.18 regarding overpreparedness and underpreparedness. Provided that, if such a student after graduation is admitted to a higher degree programme his/her total requirement in the latter

cannot ipso facto be reduced. A student may choose his/her Open Elective courses in a cogent way to meet the requirements of a minor program (see clause 7.37 for minor programs). The Bulletin lists currently available minor programs and their requirements in detail. The prior preparation required of a student who intends to choose courses from a higher degree programme of the Institute for the fulfillment of his/her elective requirement(s) are given in clause 3.15. In a programme all courses outside the elective categories are defined as named courses, in view of the fact that they have already been named in the semester-wise patterns in the Bulletin or have been named by an appointed authority through subsequent operation on the basis of guidelines given in the Bulletin. The electives are, on the other hand, selected by the student himself/herself from outside the named courses in his/her programme. The intended regions where he/she goes for the search will be designated as host regions. Certain specialised courses described in section 6 do not conform to the pool of courses which can serve as host regions in the elective category. These courses are named courses for some specific programmes and they are debarred to other students as electives in the same way as they are debarred to students who wish to take them on audit (see 7.33). For each programme the number of electives, under each of the categories (see 2.05), required to be taken by a student will be prescribed either through the Bulletin or through an appropriate Committee. Over and above the prescribed number of electives, a student of an integrated first degree programme will be allowed to take, on his/her own option, upto a maximum number of four electives. In extraordinary cases, the number may be increased by the DCA without violating limit mentioned in 1.01. For the purpose of eligibility for degree(s), a student should get valid grades in at least the prescribed number of electives – under each of the categories, of his/her programme(s). Normally, a first degree student above a particular CGPA as prescribed by AGC will be allowed to register in maximum of one higher degree course per semester. This will be counted as an open elective unless the course is listed in the pool of discipline electives for his/her programme. Once a first degree student is declared to have fulfilled the requirements of graduation the student may be permitted to register for at most one additional semester with the prior permission of his/her Head(s) of Department and Dean, AUGS. Any first degree student who is interested in pursuing open elective(s) above the graduation requirements and/or completing a minor program he/she is pursuing and if that necessitates overstay, he/she should obtain permission from Dean, AUGS at least one semester before the start of the overstay period. The overstay period can 2.06 2.07 2.08 2.09 8 be at most one semester during which the student must register for at least three new courses of at least 9 units. In case a student withdraws from one or more of his/her courses or otherwise is found not to be pursuing his/her courses in all earnestness Dean, AUGS in concurrence with the student's Head(s) of Department is authorized to get him/her graduated and evacuate the student from the campus. The structure contains a category of courses such as Practice School (PS)/Thesis (TS), which attempts a synthesis of earlier courses and gives a glimpse of the application of these courses. They carry a large number of units and are to be pursued when students can ensure sufficient time and attention

throughout the allotted period. In particular, the Practice School components are to be pursued exclusively full time throughout the allotted period. There is no provision for taking other courses along with a Practice School component course. In case of the Thesis a student may choose between 9 units worth of Thesis work or 16 units worth of Thesis work with the concurrence of his/her supervisor. A student pursuing a 16 units Thesis must pursue it exclusively full time throughout the allotted period and there is no provision for taking other courses along with it. A student pursuing a 9 units Thesis may concurrently pursue at most 3 courses (totaling at most 9 units) and will not be allowed to pursue any other course/component. Students may be allowed to register for Thesis course operated at Off-campus locations by the Departmental Committee on Academics (DCA) recommendation and approval by the Dean, AUGS. A department may allow students to opt for a Thesis course operated at Off-campus locations based on the following criteria:

- Students should normally look for reputed universities with well established research work in the area of proposed interest by an individual or a group.
- The topic of the Thesis proposed by the student in consultation with the supervisor should be broadly relevant to the student's degree and aligned with research goals of the Institute. However, inter-disciplinary research may be allowed and even encouraged.
- Credentials of proposed off-campus supervisor and letter of support for the thesis plans would be reviewed by the department. Financial assistance, full or partial, from the host university/organization is desirable but not essential.

• Off-campus Research Organization/Universities which are listed as the Practice School Stations of BITS- Pilani will be considered for allotment by AUGSD only after consulting the PS Division. Students from BITS may not be allowed to work on similar projects in the same department/division of an industry under PS and TS options.

- If necessary, the department will interact with the concerned students to evaluate their academic performance and research potential before permitting them to opt for a Thesis outside the institute.
- The HoD of each department may form a committee of at least two senior faculty members to ensure that the above is implemented appropriately.

2.10 9 The AUGS division shall issue operational guidelines from time to time, in line with the overall objectives of the Thesis course. Second Tier such At the higher degree level, the structure of the programme is classified into courses, as, Research Practice, Technical Communication, Core/Elective/General/Special Courses, Dissertation, Practice School, Internship, etc.

Registration in Practice School or Internship (only for M.E. Collaborative programmes) can be done only after all other required courses have been completed. In the case of Dissertation, while normal registration can be done only after completion of all other courses, in extraordinary cases, the DCA may allow registration in Dissertation, spread over various semesters, alongwith other courses. A student of a higher degree programme can register up to a maximum of one elective more than those prescribed in a semester. This additional elective can be from the pool of electives of the concerned degree or named/electives courses from other disciplines' with the permission of DCAs – namely the DCA of the student's Department and the DCA of the Department offering the course that the student wants to pursue. The grade obtained in such additional electives will also be counted

towards the CGPA. Each course in the Core Requirement or in the List of Electives must be a graduate level (5th or 6th level) course or an advanced under-graduate course (4th level) with the restriction that a student may use at the most two 4th level courses to meet the requirements in above. While a defined semester programme exists for M.E. (Collaborative) a case by case identification of courses is done in M.Phil. (Applied) programmes. For all other higher degrees, the semester wise programme is drawn up by the cross-campus DCA concerned (see 1.08(a)) ensuring distribution of prescribed units into Practice School/Dissertation/Research Practice/Technical Communication and other courses including Core/Elective/General/Special courses earmarked for any particular degree. Third Tier The Ph.D. programme is designed for the student to achieve a broad competence before research begins. He/she is required to clear certain course work, if not already cleared, and pass the Qualifying Examination to satisfy the Institute that his/her spectrum of knowledge is such as to enable him/her to undertake the demands of interdisciplinary research.

Working knowledge of a modern European language, wherever specified, Teaching Practice, Research Methodology and specified units of Thesis course and Seminar are significant components of the Ph.D. programme. The pursuit of research through the Thesis-Seminar course will continue and terminate in a thesis which meets the standard and requirement of the comity of scholars. University-Industry linkages that have been fostered over the years by the Institute have resulted in the Ph.D. programme moving into domains of up-to-date technology of national relevance, also enabling professionals of collaborating, associating and sponsoring organisations to pursue Ph.D. research of the Institute. 2.11 2.12 2.13 10 3.

**Registration** It has been described in Section 1 how every student once admitted to the Institute must pursue the prescribed programme which consists of a set of courses in successive semesters. Because of the structural flexibilities in the Bulletin and the flexibilities inherent in these regulations, the semester courses are not always predetermined. One of the objectives of the registration process is to name these courses at the beginning of each semester after allowing for the student's options and working out the permissible details within the limits prescribed by the rules and the announced Timetable. The Institute will always be in its right to refuse to initiate the registration process if a student, without valid reasons or without prior approval of the concerned Dean, has dues outstanding against him/her or has not paid his/her semester fees in advance. Registration is not merely a routine event but it is a process which guides a student through the complexities of a flexible system. While these regulations provide a guidance to a student, registration advisors, the teachers, and the Deans in terms of all necessary detailed specifications of action, it is to be appreciated that Associate Dean AUGS/AGSR is in overall charge of the entire process at respective Campuses. It is in this capacity that he/she should be able to do all that is necessary and permitted in these regulations to make the registration process always a vital component and an instrument for furthering the cause of an innovative educational system. The registration process for on-campus programmes is controlled by and is completed with the prior approval of Dean or Associate Dean AUGS (for first degree programmes), Dean or Associate Dean AGSR (for higher degree/PhD programmes) and Dean WILP for off-campus

programmes; for the Seminar and Dissertation courses they are guided by Dean, AGSR and the First Degree Thesis is guided by Dean AUGS; wherever necessary for PS courses they are guided by Dean PS; and for Teaching Practice/Practice Lecture Series they are guided by Dean, AGSR. Dean or Associate Dean, AUGS/AGSR is assisted by a team of registration advisors who are appointed by him/her. Registration for the semester programmes for every individual student, whether newly admitted or already on rolls, will be at the beginning of each semester on dates to be announced. Every student is required to register for his/her semester programme in person and to get his/her registration properly completed at his/her own responsibility, failing which he/she shall not be permitted to attend any classes or use any of the facilities of the Institute. The registration must be done at the location where the student pursuing his/her semester of study. 3.01 3.02 3.03 3.04 11 3.05 To meet unusual circumstances, Dean, AUGS/AGSR (for on campus programmes) or Dean, WILP (for off campus programmes) is vested with the discretionary authority to determine whether a late registration can be permitted on a case by case basis and also to determine whether such a late registration can be done with or without payment of requisite fine. In case of courses like PS, courses of off campus programmes, Thesis, and Dissertation, and courses of all the three tiers when conducted at off-campus centres, or whenever Dean PS or Dean AUGS/AGSR or Dean WILP, as the case may be, faces practical difficulty of maintaining proper coordination between the campus and these centres, they will make suitable recommendations to Dean, AUGS/AGSR. Whenever a late registration is contemplated beyond one week of the beginning of class work, in all the above cases, the concurrence of Dean, AUGS/AGSR/WILP should be obtained for making the contemplated late registration possible. The registration in a semester, when altered at the initiative of a student (see 3.26) will be called an amended registration. On the other hand, when a registration already done is altered by other events, it will be called a revised registration (see 3.27). For the purpose of reference the first registration in a semester will be hereafter referred to as original registration to distinguish it from subsequent amendments or revisions, if any. While drawing up the registration programme for the semester and subsequent amendments and revisions, if any, the student, registration advisor and Dean, AUGS/AGSR will pay particular attention to the conditions listed in the clauses as under: A. Original Registration: All students (see 3.09 to 3.20) B. Original Registration: Additional regulations for students departing from normal (see 3.21 to 3.25). C. Amendment to Original Registration: All students (see 3.26). D. Revision of Original/Amended Registration: All students (see 3.27). A. Original Registration: All students A student is not permitted to register in a semester if (i) he/she has dues outstanding to the Institute, hostel, or any recognised organ of the Institute, or (ii) his/her grade sheet in his/her immediately preceding semester is withheld, or (iii) he/she has an 'Incomplete' report 'I' in his/her grade sheet in his/her immediately preceding semester or (iv) he/she has been specifically debarred or asked to stay away from that semester. Where a 'Grade Awaited' (GA) report (see 4.15) appears in his/her grade sheet in his/her immediately preceding semester, Dean, AUGS/AGSR/WILP will act in the matter of registration, according to provisions of Clause 4.16. Certain exigencies of situations

may occur like registration in PS I, etc., where the closing of the previous semester and the registration in such a course invariably has a very thin time gap. In such situations, when the Dean/Associate Dean has reasonable evidence of good faith on the part of the student that nothing under Clause 3.09 will prevent registration, the registration in such a course will be 3.06 3.07 3.08 3.09 3.10 3.11 12 permitted, which will be subject to cancellation without notice if the student is discovered later on to be suffering from any of the conditions of Clause 3.09. A student should not without sufficient justification depart from the normal semester pattern as applicable in his/her case. The semester-wise pattern of various programmes and combination of programmes are presented in the Bulletin or would be made available at the time of admission for cases not available in the Bulletin. Before a student can register in a course, he/she should have fulfilled the prerequisite conditions attached to that this course. Clause 1.06 has stated that before registering in certain courses or a group of courses, a specified prior preparation is required. These requirements are described in the following table where the second column describes the courses to be cleared by the student prior to the registration in course or courses given in the first column, the two columns having a one-to-one correspondence (Read in conjunction with Clause 2.07 for definition of 'named courses' and Clause 6.08 for the effect of delay of PS I on Core Courses. (a) For first degree students: (i) PS I for single/dual degree (ii) PSII/TS for single/dual degree (iii) For any other prescribed semester of single/dual degree (i) Normally all courses in the semesters preceding PS I for his/her programme/composite programme. (ii) All named courses of his/her programme/composite programme including PS I, other than TS/PS-II. (iii) All named courses in semesters and terms preceding this set of courses in his/her programme. However, in case of (iii) above, the DCA may examine the case of a student who has not cleared at most two courses out of the prior-preparation package and if the "not cleared courses" has no direct bearing on the Core courses, a modified semester wise pattern may be recommended by the DCA so that the student meets the prior-preparation requirements and is able to register in the prescribed semester courses. As much as feasible, in the modified semester-wise pattern the backlog course(s) must be given first. In modified semester-wise pattern, the pre-requisite conditions must still be fulfilled. However, the finalization of the semester-wise pattern is subject to availability and other operational constraints on courses and therefore will be the prerogative of the Dean, AUGS/AGSR. Clauses 2.09 give the student an opportunity to choose courses to fulfil the elective category. In the search for courses the student may go to the general course pool of the Institute offerings in that semester outside his/her own discipline(s) and outside the Humanities Electives pool as well. However, before he/she is permitted to register in any course from the above pool the following conditions have to be remembered: (a) General conditions: Prerequisites (see 3.13), overpreparedness & underpreparedness (see 3.18), 3.12 3.13 3.14 3.15 13 (b) Additional further conditions presented in the second column for the host regions described in the first column in the following table on a one-to-one correspondence. (Read in conjunction with clause 2.07 for definition of 'host region' and with clause 3.14 for prior preparation for core courses): (i) Discipline (Core or Elective)

course of a degree other than student's own degree(s) (ii) Courses of a higher degree of his/her own discipline(s) (i) (ii) Must have completed the prior preparation of the third year first semester of programme. his/her own After clearing first set of his/her own Discipline core courses in the case of single degree. After clearing the first set of his/her Discipline core courses of the corresponding degree in the case of dual degree. Note that the first set of Discipline core courses are prescribed in the second year of the semester wise pattern of a single degree student; in the second year for the first degree and in the third year for the second degree of a dual degree student. However, special vigilance should be exercised by all concerned before registration is done. Further the appearance of any report like NC (see 4.19) or the outcome of a course in which a student had registered even after obtaining a grade should be examined for appropriate actions. Unless specifically permitted by these regulations (see 3.25II) no student can register in a course if He/she is considered to be overprepared or underprepared in relation to the contents of the course. The semester programme drawn up finally should be free from any Timetable conflict. If these regulations mandatorily require a registration for a specific course and in the meantime the course has ceased to be offered, Dean, AUGS/AGSR/WILP will name, for this limited purpose, another academically similar course from the current offerings and assign to it the same units as that of the specific course.

B. Original Registration: Additional regulations for students departing from normal The departures from the normal pattern are to be pinpointed and quantified by making a tally of courses in what is known as eligibility sheet. The eligibility sheet of the student is updated at the conclusion of every semester by entering against each course his/her performance in that course in that semester (grade or report). This process when carried out every semester gives also the multiple performances, if any, in a course over the semesters. The courses a student has repeated under 3.16 3.17 3.18 3.19 3.20 3.21 14 clause 3.25 II or has been required to register again by appropriate authority would thus be easily identified from the eligibility sheet. Before doing a semester registration a student is first located in the proper point of reckoning (which is invariably the beginning of a semester/term in the semester wise pattern of his/her prescribed programme). For students admitted with advanced standing this location is done on a notional basis. On the other hand, for students in single degree, dual degree, students admitted with marginal deficiency, students admitted in the second semester and students who have gone through one or more transfers, this is done with reference to the student's date of entry into the Institute. Now, this semester of operation is designated as current semester for the student. All courses which appear in the current semester are called prescribed semester courses, to be denoted by (PSC). Any course appearing before the (PSC) is said to be a course appearing in the past region. Any course which appears later than the (PSC) is said to be a higher level course (named course or elective slot). The identification of (PSC) and the higher level courses, however, is subject to occasional switching of courses between adjoining semesters as announced by Dean, AUGS/AGSR through the Timetable. A student may at his/her own responsibility depart from his/her (PSC) when feasible and permissible in these regulations. The pattern and the pace such a student follows for himself/herself cannot be offered as a

modification of his/her prescribed programme (see 1.07). A student with an intelligent understanding of the application of these rules can make a plan to graduate earlier or later than the time visualized in the Bulletin. However, any student who departs from the normal pace should in his/her own interest ensure that he/she remains outside the provisions of the sanctions described in clause 5.02 and will be well advised to seek guidance from the Registration Advisors or Dean, AUGS/AGSR to make suitable prior planning, consistent with predictable information on Timetable constraints, prerequisite requirements, and other registration procedures, so that his/her overenthusiasm or lack of application does not cause him/her avoidable disappointment. A student departs from his/her normal pattern whenever (i) He/she repeats a course He/she has already cleared (see 3.25 II), (ii) takes a higher level course concurrently with his/her current semester courses (see 3.25 III), (iii) accumulates a backlog (see 3.25 I), (iv) decides to take the electives earlier or later than where they are located in his/her programme. The original registration in a semester and its subsequent amendment, if any, for such students are subject to additional conditions attached to each item of departure listed as under : (i) Clearing the backlog with controlled forward movement (clauses (a) to (g) in 3.25 I) (ii) Repeating a course (clauses(h) to (l) in 3.25 II) (iii) Taking a higher level course (clause (m) in 3.25 III) (iv) Deciding when to register for electives (clause(n) in 3.25 IV) 3.22 3.23 3.24 3.25 15 But in all cases a student has to first take up the task of 3.25 I before He/she takes as an additional burden of either 3.25 II, III or IV or a combination thereof. However, the computation of (BL) and (PSC) is further subject to clause (n) in 3.25 IV. I. Clearing the backlog with controlled forward movement (a) Continuing the procedure introduced in clause 3.21, the total backlog for a student at a point of reckoning will consist of all courses located in the past region of the semester wise pattern which are identified by the following steps of operations: (i) Any course from which the consequences of NC have not yet been removed by the student; (ii) Any course in which the student has not yet obtained a grade; and (iii) Amongst the remaining courses with grades, any course (say, course No.1) where the latest grade obtained by a student is inadequate to meet the prerequisite requirements of a later course (say, course No.2) and the student has yet to register in course No. 2 now (as part of (BL) or part of (PSC) or in future in view of the fact that course No. 2 suffers from NC or has no grade or has an inadequate grade for the prerequisite requirements of course No. 3, for which the student has to register under the same circumstance described for course No. 2 and so on until the last course of the prerequisite chain has been accounted for (see 3.13). The total backlog at the beginning of registration in the current semester taken as the point of reckoning would be the union of the above three sets (i), (ii) and (iii) and would be denoted by (BL). (b) Every student in a semester must first register in his/her backlog courses. In other words, (BL) is the first charge on his/her registration. Only when He/she so registers in the full component of (BL) He/she can register in his/her (PSC). And only when He/she is also registered in the full component of (PSC) He/she can register in higher level courses/ repeat a course which He/she has already cleared (see 3.25 II & III). Any subsequent amendments (withdrawal or substitution) to the original registration must be done stepwise first on the higher level and

repeat courses. Only when higher level and repeat courses are fully removed any amendment can be done on the (PSC). Only when the (PSC) have been fully removed, any amendment can be done on the (BL) courses. (c) The general rule enunciated at (b) above for (BL) and (PSC) may not be operable in certain practical situations. The particular course may not be available in the Timetable in the current semester, the student may not have met the prerequisite of some courses even if they are available in the Timetable or the student may have already cleared with adequate grade one of the courses in the current semester as a higher level course in an earlier semester. For the purpose of this practical need, the (BL) will be suitably reduced to the full component of its operative portion called (OBL) and the (PSC) will be reduced to the full component of its operative portion called (OPSC). 3.25 | 16 (d) Recognising that there may be Timetable conflict even within the (OBL) and also between a course in (OBL) and a course in (OPSC) which is linked by prerequisite condition with a higher level course, Dean, AUGS/AGSR is authorised to name in such a combined situation what the full components of (OBL) and (OPSC) are in which the student must register. In giving his/her decision the Dean will be guided by the overall requirement that an attempt to clear up (OBL) may not create a situation where delay in the above mentioned prerequisite course of the (OPSC) would generate more backlog in future. Whenever subsequent operations refer to (OBL) and (OPSC), care has to be exercised to find out whether these are the full components of the (OBL) and (OPSC) or they are only effective residues of (OBL), (OPSC) created by the above process. (e) It should be obvious from the above that if a student merely remains registered for a part of the (OBL) He/she has no opportunity to register in any other course in that semester. Similarly, a student who has no (OBL) to do and remains registered only in a part of (OPSC) cannot take any other course in that semester. See (d) above for the usage of (OBL) and (OPSC). (f) Recalling that the purpose of backlog computation was to determine what controlled forward movement on a course by course basis is possible, computation of backlog has no meaning where even one course as a backlog prevents further registration. In such cases, it is the rule regarding prior preparation which will determine what forward movement is possible. The requirements of prior preparation for registering in PS/TS for single or dual degree scheme situations are available in clause 3.14. A somewhat complicated situation exists in the case of Core Courses for single or dual degree scheme, where the prior preparation is given in the same clause for the first registration in the Core Courses: When Core Courses in a semester coexist with other courses, the backlog computation and its application will apply to only the courses which coexist with Core Courses; and for Core Courses the prior preparation clause will operate. This process determines separately how registration has to be done for these two portions of the semester courses. Further, once the clause has been applied to any Core Course for the first time, a subsequent registration in later semesters in any of the Core Courses will take place as if there was no distinction between Core Courses and any other course, as far as the backlog computation is concerned. (g) It is to be noted that the emphasis on a need to clear up the backlog also incidentally averts the sanctions of clause 5.02 (iii). When this does not happen, the sanction clause 5.02 takes over and a student goes

under the purview of ACB as per provisions of clause 5.03. While a student is under the purview of ACB he/she loses the freedom of operation envisaged in this section. It is therefore very much in the interest of the student to take advantage of the fact that backlog removal and a controlled forward movement are far better than going under the purview of ACB, wherein even this degree of forward movement is heavily reduced in view of the burden which He/she places on ACB. II. Repeating a course 17 3.25 II (h) If the Institute facilities permit, a student who is still in the process of completing the requirements of a degree, may, at his/her own option, repeat, with a view to improving his/her grade, a course which He/she has already cleared, provided the course forms part of the current prescribed programme for the student. (i) (j) This facility for repeating a course already cleared will automatically cease to be available to a student when He/she has completed the requirements of graduation or he/she is just short of graduation by courses like PS and Thesis-Seminar (in first and second tiers) which cannot be taken concurrently with any other course. The Practice School courses, Thesis, Seminar, Internship and other courses of the M.E. (Collaborative)/M.Phil. (Applied), project courses and other courses specifically so debarred in the Bulletin cannot, however, be repeated except when ACB require a student to register again. (k) Repeating a course is possible only after the full component of (BL) (if any) and the full component of (PSC) has been registered for in the semester and continues to be so registered. Any subsequent amendment to the original registration can be done only according to clause 3.25 I (b) above. Consult also Clauses 3.25 I(c) & 3.25 I (d) for the operative portions of (BL) and (PSC). (l) It would be obvious from (k) above and the general requirement of progress from semester to semester, that it is not possible to spend an entire semester exclusively for repetition of courses (see 7.07 for summer term situation). III. Taking a higher level course (m) Registering in a higher level course is possible only after the full component of (BL), if any, and the full component of (PSC) has been registered for in the semester and continues to be so registered. Any subsequent amendment to the original registration can be done only according to clause 3.25 I (b) above. Consult also Clauses 3.25 I(c) & 3.25 I (d) for the operative portions of (BL) and (PSC). IV. Deciding when to register for electives (n) With a view to planning his/her entire quota of courses under the category of electives, a student may, at his/her own responsibility, delay or advance taking the electives with reference to their prescribed appearance in the semester wise pattern. To ensure this privilege the operation of Clauses 3.25 I, II and III above will be made after the components of electives have been removed from the packages constituting (PSC) and (BL). It must, however, be understood that this facility is only for the limited purpose of registration as envisaged in these clauses and does not affect the application of any other clause. 3.25 III 3.25 IV C. Amendment to Original Registration: 18 3.26 Amendments to original registration are invariably initiated by the student himself/herself and are covered by the conditions listed as under: (a) Any time within two weeks from the beginning of the semester (or one week from the beginning of the summer term) a student may request the Dean, AUGS/AGSR (for on-campus)/Dean WILP (for off-campus) for Substitution, by another course, of a course in which he/she has already registered. (b) If a student desires to withdraw from a course,

he/she may submit a formal application for Withdrawal from the course to Dean, AUGS/AGSR (for on-campus)/Dean WILP (for off-campus) within ten weeks from the beginning of the semester (or five weeks from the beginning of the summer term). (c) In exceptional circumstances, a student may be permitted by Dean, AUGS/AGSR (for on-campus)/Dean WILP (for off-campus), to withdraw from any course(s) or all courses when the Dean is satisfied as to the genuineness of the extenuating circumstances. (d) In the above matter of withdrawal within normal time and withdrawal in exceptional circumstances, Dean, AUGS/AGSR will act on the recommendation of Dean PS for Practice School courses; of Dean, AGSR for a student who is registered in Thesis/Seminar/Independent study, Dissertation, Teaching Practice/Practice Lecture Series course; of Dean WILP for a student who is registered in any off-campus programme. (e) No amendments through withdrawal or substitution in the original registration can be initiated by the student if the net result of this amendment is to undo the discretionary decision of the Dean concerned at the time of the original registration in regard to certain courses and their interdependence like (BL), (PSC), repeat/higher level course (see 3.25 I(d)). (f) A student who has come under the purview of ACB ceases to have any initiative in the amendment of his/her original registration. As provided in Clauses 5.03 and 5.04 ACB determines the courses in which a student must register during all the semesters in which he/she remains under the purview of ACB. When any alteration in the original registration is called for it will be done entirely at the discretion of ACB. D. Revision of Original/Amended Registration: All Students The revision of original/amended registration can be caused by concerned authority any time during the semester/term as per details listed as under: (a) If the registration of a student in a course is not found to be in accordance with these regulations, his/her registration in that course will be cancelled and the grade obtained, if any, will be rejected. (b) The registration of a student in a course or complete set of courses in a semester can be revised through the instrument of RC (see 4.18) by the concerned authority when He/she is found guilty in cases of unfair means, 3.27 19 breach of discipline, etc., or when He/she persistently and deliberately does not pay off his/her dues. (c) Dean AGSR may cause a revision of registration already done to accommodate entry into the Ph.D. programme (see 8.08 and 8.44) or to include Ph.D. Thesis registration (see 8.21) or to cancel a Thesis registration (see 6.23). He/she should, however, ensure that whenever He/she causes such a revision to be made in respect of courses where a grade is required at the end of the current semester, He/she allows adequate time for meaningful grade to emerge. (d) Dean PS may cause a revision of registration already done by cancellation of the PS option (see 6.13); Dean WILP by cancellation from the off campus programmes and in the special situation provided in clause 4.20(e), through the instrument RRA/DP. (For symbols DP, RRA, see 4.12). (e) Dean, AUGS/AGSR may cause a revision of registration already done, when a student ceases to be on the rolls of the Institute by his/her own action or by the action of the Institute, by cancelling registration in all courses (see 4.18). (f) ACB may cause a revision of registration already done of a student who is under its purview (see 5.03 & 5.04). (g) Revision of registration already done may be modified by the concerned Dean/Associate

Dean. (i) by allowing students to register in additional courses; (ii) by canceling the registration of a course in which the student has already registered; when the situation warrants. (h) If for a student who is already registered, there is a delay for unavoidable reasons in the announcement of decisions on transfer, dual degree, etc. the registration will be revised by an appropriate authority to accommodate these decisions, if necessary. 20 4. Teaching and Evaluation The objective of class room education is to awaken the curiosity of the student, generate habits of rational thinking in him/her, gear his/her mind to face the unfamiliar and train him/her to be able to stand on his/her own. While class room instruction helps the student in the organisation and correlation of facts, in comprehension of ideas and the creative use of knowledge, the teacher has the added responsibility to make the student search for knowledge on his/her own and induce him/her to use the facilities like the library, laboratory and the environment to optimize his/her learning process. Self-study by the student would therefore, be an important factor in the planning of teaching and evaluation. The student is required to cooperate and respond to this challenge. Teaching and evaluation form a unity of function and operate in a climate of mutual understanding and trust. To ensure a shared responsibility, the regulations indicate some formal guidance. Every course whether single section or multi-section is conducted by a member of the faculty called instructor-in-charge, with the assistance, where necessary, of the required number of instructors who will be partners with him/her in meeting the full academic perceptions and organisational needs of teaching the course and evaluating the students. Wherever the instructor-in-charge is mentioned in these regulations it connotes the team of instructors, acting as one entity under his/her captainship. The instructor or the team of instructors should make a comprehensive plan in respect of conducting the course even before the semester begins and in a multi section course remain in continuous interaction in order to ensure a smooth operation of the course. While recognising variations due to personal attitudes and styles, it is important that these are smoothed out so that the operation and grading in the different sections in a course, indeed between courses across the Institute; are free from any seeming arbitrariness. Within one week of the beginning of classwork, the instructor-in charge/instructor must announce to his/her class/section through a hand-out, the necessary information in respect of (i) the operations of the course (its pace, coverage and level of treatment, textbooks and other reading assignments, home tasks etc.); (ii) various components of evaluation, such as tutorials, laboratory exercises, home assignment, several quizzes/tests/examinations (announced or unannounced, open book or closed book), regularity of attendance, etc., (iii) the frequency, duration, tentative schedule, relative weightage etc. of these various components; (iv) the broad policy which governs decisions about make-up; (v) mid-semester grading; (vi) grading procedure (overall basis, review of border line cases, effect of class average, etc.) and (vii) other matters found desirable and relevant. 4.01 4.02 4.03 4.04 21 4.05 For all structured courses there will be minimum of three components of evaluation including one Comprehensive Examination. The different components of evaluation should be evenly spread out in the semester and would aim to draw out response from the student in regard

to various attributes like spontaneous recall, ability to apply known concepts, capacity to work on his/her own, competence in conceptualised arguments, ability to face unknown situations, etc. At least one of the components (examination) must be comprehensive enough to include the whole course and will be held at the end of the semester. At least 20% of the evaluation component must be open book in the form of written tests or take-home assignments for a first degree course. At least 40% of evaluation components must be open book in the form of written tests/ take-home assignments for a higher degree course. A higher degree course should also include two or more research-oriented activities (Literature Survey, Seminars/ Presentations/ Research Summaries, Design/ Development of processes/ products/ artifacts, Experimental or Quantitative Analysis of processes/ products/ phenomena, Design of Experiments, etc.) and include at most 60% of evaluation components in the form of Tests/Exams. The components and the instruments of evaluation in certain courses like PS, Teaching Practice, Research Practice, Thesis, Seminar, Dissertation and courses of off-campus programmes follow a different regimen and methodology. Details in respect of most of them are presented in section 6. It shall be the responsibility of the individual student to be in attendance in all classes and to take prescribed quizzes, tests, examinations and to submit properly and promptly all homework. Any student who misses any component of evaluation must immediately approach the instructor-in-charge so that the instructor-in-charge, if He/she is satisfied as to the bonafide of the request, may arrange as soon as possible a make-up approximating as closely as possible the circumstances of the component of evaluation which the student missed. If, on a rare occasion, a student anticipates a genuine difficulty of meeting the date of the component of evaluation, He/she would do well to take his/her instructor-in-charge into confidence prior to the event. The decision of the instructor-in-charge in all matters of make-up shall be final. Just as evaluation is done in a continuous manner, feedback should also be available in a continuous manner. Thus the answerscripts must be promptly evaluated, shown to the students for them to obtain any clarification on their own performance and returned to the students whenever practicable. The performance of the students in the examination should be discussed in the class giving as much detail as possible like the highest, lowest and average performances. At the conclusion of the semester a student is awarded a grade in each of the courses He/she has taken during this period. The grade awarded to a student in a course will depend on his/her total performance in all the components of evaluation as designed by the instructor-in-charge. Apart from grades the instructor-in-charge also reports by suitable words, certain events/facts and these reports should not be misconstrued as grades (see 4.11 & 4.12). 4.06 4.07 4.08 4.09 22 4.10 The instructor-in-charge is responsible for holding the examinations, awarding final grades and transmitting the grades/reports to Dean, AUGS/AGSR/WILP within the deadline set by him/her. This deadline is set in consistence with clause 4.25. The list of letter and non-letter grades, their applicability and connotation are given below: (a) Letter Grades Where Applicable (All courses other than those specified in (b) below) (b) Non-letter Grades Seminar/Independent Study Letter A A- B B- C C- D E Teaching Practice/Practice Lecture series Internship (of M.E. Collaborative only) Qualitative meaning Excellent Very

Good Good Above Average Fair/Average Below Average Poor Exposed Dissertation/Project Work/Project/Design Project/ Capstone Project (for off-campus only) Courses taken on Audit; Interim grade for Ph.D. Thesis Final grade for Ph.D. Thesis Grade Point attached 10 9 8 7 6 5 4 2 Good Poor Above Average Below Average Outstanding Very Good Good Average Poor Excellent Good Fair Poor Satisfactory Unsatisfactory Acceptable 4.11 23 A one-time provision in view of the COVID-19 pandemic crisis. \*Note: Non-Letter Grade 'CLR' indicates that the course is cleared to fulfill graduation requirements. As this is a non letter grade it will not affect CGPA and was awarded on meeting the minimum criteria set for clearing the said course (i.e. even though some components are missed by the student, the overall performance was good in other evaluated components). This provision came into force during academic year 2020-21. Unacceptable CLR\* The various reports listed below are elaborated in the subsequent clauses as specified below: (i) Incomplete 'I' described in clauses 4.13 & 4.14; (ii) Grade Awaited (GA) described in clauses 4.15 & 4.16; (iii) Withdrawn (W) described in clause 4.17; (iv) Registration Cancelled (RC), Required to Register Again (RRA) and Discontinued from the Programme (DP), all described in clause 4.18; and (v) Not Cleared (NC) described in clauses 4.19 & 4.20. (vi) Thesis Grade Awaited (TGA) described in clause 4.15a. (vii) Allowed to Continue (AC) described in clause 4.15b. If the instructor-in-charge finds a student to have not fulfilled some of the requirements of a course before the final deadline for transmitting the grade, and he/she is satisfied that he/she is able to transmit some grade or a report with or without this particular fulfillment, but at his/her discretion wishes to give the student an opportunity, he/she may, within the deadline, send a report 'I' (Incomplete) and also inform the student of the same. It shall be the responsibility of the student to contact the instructor-in-charge in time for the replacement of the 'I' report within two weeks after the end of the semester (and within one week after the end of the summer term, for a summer term course) which may be relaxed by Dean, AUGS/AGSR for on campus programmes and by Dean WILP for off-campus programmes, failing which the instructor-in-charge will communicate whatever grade/report is possible for the situation. Whenever such relaxation is made, Dean, AUGS/AGSR/Dean WILP will specify at his/her discretion, with the consent of the instructor-in-charge, the date by which 'I' report has to be converted. The requirements envisaged in clause 4.13 must be completed within the time allowed by Associate Dean, AUGS/AGSR/Dean, WILP. If the extra time given goes beyond the registration in the next semester/term (see 3.04) no registration in the next semester/ term is possible and the student should seek permission to stay 4.12 4.13 4.14 24 away as per clause 1.18. In the event either the instructor-in-charge or Dean, AUGS/AGSR/WILP rejects the request for the extra time, the provisions of clause 4.13 will operate. There are many situations where operational and practical difficulties may cause a delay in the communication of a grade. Certain situations which are visualised in this connection are: (i) where a case of unfair means is pending; (ii) where a case of indiscipline is pending; and (iii) where the courses are being conducted at an off campus centre for PS students, for off-campus students or for Ph.D. students and where precise coordination between the Institute and these centres may not work in a timely manner. In these

circumstances, the Dean concerned (Dean, AUGS/AGSR for (i), Associate Dean Students' Welfare for (ii), and Dean PS/Dean WILP for (iii)) may make a specific authorization for the instructor-in-charge to report GA (Grade Awaited). The Dean concerned above will also simultaneously advise Dean, AUGS/AGSR the estimated time by which the grades will be received. Where a Ph.D. Thesis has been submitted and the final evaluation is pending, the Dean, AGSR/Dean WILP will report TGA as part of evaluation for thesis submitted for PhD students. For evaluation of Dissertation course, in case the Dissertation course is offered in split form in more than one semester, with the prior approval of the concerned Dean, student may be given, in semesters other than the final one, an interim report 'AC' (allowed to continue) when the teacher feels that there is satisfactory progress and the student will be allowed to continue the dissertation for the remaining units in the subsequent semesters. For operational purpose the report AC will be same as I or GA. When the final grade in dissertation emerges, it will replace AC report in the previous semesters. However, where the student has not done any work the award of NC will continue to remain. Furthermore this does not apply for the case of Dissertation of extended duration (see 6.16b) wherein the student must be registered in a different(ly numbered) Dissertation course in each of the semesters involved. In the latter case, a valid grade must be awarded for that Dissertation course at the end of each semester. Whenever the report GA appears in the grade sheet, permission for further registration of such a student will be acted upon by the Dean, AUGS/AGSR on the recommendation of the concerned authority (see 4.15). Whenever a student is allowed to withdraw from a course, the same is recorded in his/her grade sheet as W (Withdrawn). Whenever a semester performance in a course is reported as W, for all operations of these regulations which are dependent on performance the W will be ignored; this means one should go backward to the previous performance, if any, which takes over and this process must be repeated until one reaches a performance which cannot be ignored. Where a student's registration for a course has to be cancelled this fact will be reported in his/her grade sheet as RC (Registration Cancelled); however, since an RC by itself may have many meanings, this reporting is subject to the following. If it is clearly known that the student will be required to register again in the same course it will be reported as RRA (Required to Register Again). If the RC amounts to discontinuation from the programme or the programme option it will be reported as DP (Discontinued from the programme), (see also 6.13, 6.23 & 4.20 (e)). If the 4.15 4.15a 4.15b 4.16 4.17 4.18 25 cancellation of registration is not reported either as RRA or as DP but is reported as RC, it does not necessarily mean that it is free from any constraint. The meaning of the constraint has to be constructed from the context in which RC was reported. An innocuous RC has to be ignored for all purposes of registration and operations of these regulations which are dependent on performance. This means that one should go backwards to a performance which cannot be ignored, as described in clause 4.17 for W. Where a student continued to remain registered in a course but gave the instructor inadequate opportunity to evaluate him/her by absenting himself/herself from quizzes/ tests/ examinations/other components of evaluation, or by appearing in the same for the sake of appearance without applying himself/herself to the

task in hand or by submitting a blank script (answer book) this event will be reported as NC (Not Cleared) (also see 1.17). The student so reported would have to register again in the same course as per Clause 4.20 as soon as necessary. In the case of courses like Thesis/Seminar/Dissertation etc. where the evaluation may not be arrived at through such formalised structures as quizzes/tests/examinations the periodic task given by the supervisor or the instructor would be the basis to determine whether a student is cooperating with him/her for him/her to arrive at a grade in any semester/term as provided in these regulations. For consequence of NC report in Thesis/Seminar/Dissertation/Practice School see clause 4.20 (d) & (e). Whenever a student gets an NC report in a course irrespective of whether He/she has a grade in the course or not earlier to this event the following will govern further action. It is to be noted that an NC cannot be ignored, except under the situations described in (b) and (c) below: (a) Whenever a student gets an NC report in a course which is in the compulsory package of his/her programme He/she is required to again register in the same course and get a valid grade therein. (b) If a student has an NC report in a course taken as elective, He/she can either repeat the course to get a valid grade or ignore it to choose another course (subject to a maximum limit as per clause 2.08). However, a student must get valid grades in atleast the prescribed number of electives in his/her programme. (c) Whenever a student's record has an NC in a course which remains unaccounted after a process of transfer has been completed (see 7.19), it will not be possible for him/her to wipe out the NC report in such a course because this course is not a part of his/her programme anymore; and he/she can graduate with this NC. (d) If a student is reported NC in Thesis or Seminar or Dissertation, he/she will be required to register in the same for one more semester. Operationally this is to be achieved by requiring him/her to register once again in as many units of Thesis or Seminar or Dissertation in which he/she was registered when he/she was reported NC. (e) It is to be clarified that there cannot be an NC report in the PS courses, M.E. (Collaborative)/ M.Phil. (Applied) courses and some other courses. 4.19 4.20 26 Clearly it would amount to a breach of professional conduct required in Clauses 6.13 & 10.18 and tentative possibility of NC report would be converted into DP and discontinuation from these programmes will take place as provided in these clauses. However when Dean PS/Dean WILP is satisfied that the tentative proposal of NC does not amount to invocation of this clause, he/she will cause registration in these courses to be revised by reporting RRA and thus requiring the student to register again in the same. (f) If a student is reported NC in a project type course, it will be administratively converted to RC by Dean, AUGS/AGSR and future registration in project courses will be done only if the Dean, AUGS/AGSR is satisfied with the genuineness of the candidate's interest in the course. The Cumulative Grade Point Average (CGPA) will be used to describe the overall performance of a student in all courses in which He/she is awarded letter grades, since his/her entry into the Institute upto and including the latest semester/term as per the procedure given in this clause. It is also used for the declaration of division when the programme is completed. It is the weighted average of the grade points of all the letter grades received by the student from his/her entry into the Institute and is computed as follows: + CGPA = 1 1 + 2 2 3 3 u g u

g ug ug u u u u n n 1 + + + + + 2 3 ..... .... n where u<sub>1</sub>, u<sub>2</sub>, u<sub>3</sub>, ... u<sub>n</sub> denote units associated with the courses taken by the student and g<sub>1</sub>, g<sub>2</sub>, g<sub>3</sub> ... g<sub>n</sub> denote grade points of the letter grades awarded in the respective courses. Since multiple performance in a course in which the student has already received a grade is possible, whenever through such a process a new grade is obtained, it will replace the earlier one in the calculation of CGPA. On the other hand, if through this process merely a report emerges, this event by itself will not alter the CGPA. A first degree student pursuing a minor program will be awarded an additional CGPA specifically for the minor program. This will not affect the inclusion of the grades of the courses related to the minor program in the calculation of the CGPA for the student in the degree program(s) He/she is enrolled in. A student's grades, reports, CGPA, etc. at the end of every semester/term will be recorded on a grade sheet, a copy of which will be issued to him/her (see 1.12). The grade sheet will be withheld when a student has not paid his/her dues or when there is a pending case of breach of discipline or a case of unfair means against him/her. The instructor-in-charge is also responsible for maintaining the full records of each student's attendance, performance in different components of evaluation, section/ class average, mid-semester grading, copies of question papers, and any record of evaluation that were not returned to the students. Such records should be maintained for at least two semesters after completion of the course. The instructor in-charge is also required to submit to Dean, AUGS (if courses are offered for first degree programmes) or Dean, AGSR (if courses are offered for higher degree programmes) for permanent record in the Institute a requisite number of copies of all 4.21 4.22 4.23 27 question papers and all hand-outs (see 4.04) given to the students. By the same token, the convener of the respective DRC will forward to the Dean, AGSR the question papers of the Ph.D. Qualifying Examinations together with connected course content given to the students. If scrutiny or statistical analysis becomes necessary the above records and any other pertinent information should be made available by the instructor-in-charge of the course. In a flexible system designed to give the responsibility to the student and which authorises certain Deans/Associate Deans to monitor this system, it is not practical to write rules as to how the individual teacher should play his/her own role. The teacher's role must always remain active. It is only he/she who can detect incipient problems and identify great promise. Moreover, there are several courses like Thesis, Seminar, etc. where the structuring of the operation is open-ended. Whenever found necessary, individual teachers may send their recommendations to the appropriate Dean/Associate Dean suggesting changes as provided by these regulations in the registration of a student. The content and contours of certain courses like PS, Thesis, Seminar, and Dissertation not only attempt an institute-wide meaning but they are also conducted and pursued in various PS stations and off-campus centres of BITS as well as outside these. In order to achieve the unusual educational thrust as well as maintain PS interfacing with the world outside the campus, these regulations provide that Dean PS will be the instructor-in-charge for all PS courses and Dean WILP for all M.E. (Collaborative)/M.Phil. (Applied)/off-campus programmes. Associate Dean AUGS of respective Campuses will be the instructor-in-charge for First Degree Thesis whereas Associate Dean AGSR of respective Campuses will be

the instructor-in charge of Dissertation, Seminar, Independent Study, and Dissertation courses. By the same approach, Associate Dean, AGSR is named the instructor-in-charge of all Teaching Practice, Practice Lecture Series, Reading Course, Study in Advanced Topics, Research Practice, Research Methodology I and Research Methodology II courses which are conceived and operated in such a way that the student gets a practical experience in the art of teaching and communication. Associate Dean, AUGS/AGSR of respective Campuses has the responsibility for the offering of appropriate courses in a semester, for scheduling of examinations, and for an overall monitoring to ensure the effective fulfillment of the contract envisaged in these regulations between the teacher and the taught in each course. Associate Dean, AUGS/AGSR, has further, the discretionary authority to devise acceptable procedures for obtaining a feedback from teachers as well as students about the status and progress of a course. To ensure proper and full coverage of the syllabus, the date of late registration of a student as well as the date of departure of a Ph.D. student before the completion of the semester, even when permissible under these regulations, would have to be fixed with the prior concurrence of Dean, AUGS/AGSR.

**5. Minimum Academic Requirements**

The educational philosophy of the Institute interlinks and at the same time distinguishes between the performance of a student in a single course and his/her overall cumulative performance. Accordingly, the expected minimum academic 4.24 4.25 4.26 4.27 5.01 28 requirements for the integrated first degree programmes and the higher degree programmes are described in clause 5.02 of this section. The corresponding requirements for the Ph.D. programme are to be inferred from the clause 8.35. While the Doctoral Counselling Committee (DCC) deals with the defaulting students in the third tier (see clause 8.38), students in the first two tiers are placed under the direct academic supervision, control and tutelage of the Academic Counselling Board (ACB), consisting of Associate Dean, AUGS (Chairman), Associate Dean, AGSR, Associate Dean, Student Welfare, two faculty members and two students nominated by the Senate. The ACB takes immediate charge of such a student and requires him/her to follow a specific path so that he/she could be rehabilitated at the earliest. Failing the efforts that are described in the succeeding Clauses of this section, the student would be required by ACB to leave the Institute. It should be understood that ACB which has, over the years, developed various internal procedures and techniques to achieve the objective of steering the student out of ACB, is not necessarily bound by the procedures of the past and would continue to innovate in order to maintain academic standards of the Institute and arrive at a quickest method by which the student either meets its rigours or leaves the Institute. At the end of every semester/term the following minimum academic standards have to be achieved by the students in various programmes:

- (i) A student should not have secured more than one 'E' grade in the case of integrated first degree/first level diploma and any 'E' grade in the case of higher degree/higher level diploma, in that semester.
- (ii) A student should have CGPA of at least 4.50 in the case of integrated first degree/first level diploma and at least 5.50 in the case of higher degree/higher level diploma.
- (iii) A student should have at least cleared as per his/her latest performance, such courses (counted from the point of his/her entry into the Institute)

as are prescribed for a period that corresponds to two-thirds of the number of semesters spent by him/her since his/her entry into the Institute with reference to his/her current programme. This means that at any stage of reckoning the student should not have spent more than 50% extra time than what is prescribed for him upto that stage. (iv) While a minor program is optional for a student and a student who is admitted to a minor program may graduate without completing the same, the completion of a minor program requires the student to maintain a minimum CGPA of 4.5 in the courses applied to the minor. The requirements (i), (ii) & (iii) of clause 5.02 above are minimum requirements that every student should meet at the end of every semester. Failure to meet even one of these requirements is called 'an affliction'. One or more of these afflictions will automatically bring him under the purview of ACB or a designated authority. During the pendency of this purview, the student will lose all his/her options in regard to the various features permitted during the process of registration, namely, option of naming courses, choice of courses under electives, repetition of courses, taking a higher level course, a departure from the normal, etc.; and will also lose all his/her options for an amendment to his/her original 5.02 5.03 29 registration namely, substitution and withdrawal. However, ACB will be fully in its rights to revise the original registration at any time during the semester. Indeed, his/her entire semester courses will be determined by ACB and will have to be followed to the satisfaction of ACB. If his/her performance in the course package prescribed by ACB in each semester suffers from NC report or lacks the efforts to remove the affliction(s) of clause 5.02 for which He/she came under the purview of ACB, it would be construed that He/she is not working to the satisfaction of ACB. It should be his/her single minded objective to fulfil the requirements of clause 5.08 thus enabling himself/herself to go outside the purview of ACB.

(a) Recognising that the student comes under the purview of ACB on account of one or more afflictions of clause 5.02, ACB is charged with the responsibility to steer him/her out of ACB. The minimum conditions for this will be fulfilled whenever application of clause 5.02 shows in a future semester that the student no longer suffers from any of the disabling conditions of clause 5.02. This however, will be the minimum requirement. ACB may prescribe more than the minimum requirement as permitted in clause 5.08 (also see 5.04(c) below). It is obvious that ACB will be burdened with cases which may not only combine all the three disabling conditions of clause 5.02, but also be burdened with heavy backlog. Thus, ACB will have to prepare tailor-made remedies for each case or a set of similar cases. It is to be clarified that ACB creates no new regulations nor prescribes special PSC. ACB still functions within the broad confines of these regulations and for registration of a student in each semester during the pendency of the student's purview under ACB, draws its general authority from section 3 with special guidance from clauses 3.25 I, II and III. To act with promptness and to meet certain specific minimum goals, ACB is freed from the restriction of following the sequence and the special tags attached to courses in clause 3.25. In this context, therefore, the familiar terminology such as backlog, higher level courses, repetition of courses, under-loading or over-loading, etc. will lose their usual meanings. (b) ACB will estimate the degree by which a student falls short of the minimum academic requirements

of clause 5.02, will draw a time frame (i.e. number of semesters), determine a package of courses for his/her registration in each of the semesters and a specific task to be fulfilled in each semester within the time frame and lay down necessary stipulations. If it so happens that a summer course becomes available ACB will also have the power to require a student to register during the summer term to ease the pressure partially. (c) While the minimum academic standard as per clause 5.02 is monitored at the end of each semester, the requirement of graduation as enunciated in clause 9.01 monitors an up-to-date integrated performance from the beginning, and it is possible for a particular student to seemingly fulfil clause 9.01 but have failed to meet the requirements of clause 5.02 (i) at the end of a particular semester and thus come under the purview of ACB. ACB is authorised to review the entire history of the academic record of such a student and either declare him/her immediately out of its purview 5.04 30 to facilitate operation of clause 9.01 and clause 9.03 or retain him/her further under its purview. (d) Since the only objective of ACB is to steer the student out of ACB, neither the student's sojourn in ACB nor the responsibility of ACB towards the student can be confused with any other ambition on either side. (e) Whenever a student falls into the habit of going in and out of ACB at frequent intervals or when a student has given an evidence of perpetual misadventure, ACB will keep him/her under its purview, if necessary, for even a longer time than it would otherwise keep him/her. (f) For each student under its purview ACB will pronounce the number of semesters within which afflictions are to be removed and additional requirements, if any, are to be fulfilled; name the courses that He/she has to take in each semester to the extent it is possible to do so ahead of time; and lay down necessary stipulations for achieving intermediate targets after each semester. When once the specific tasks have been so spelt out, the student should fulfil these to the satisfaction of ACB. ACB will assess at the end of each semester the student's progress towards the twin objectives of overcoming the affliction of clause 5.02 which brought him/her into ACB and at the same time not falling into other disabling provisions of clause 5.02. ACB will also measure the extent to which the student is making progress towards the ultimate goal. If it is discovered that the student is not reaching the intermediate targets set for him/her even at the end of the first semester under the purview of ACB, ACB is authorised to completely jettison the earlier declared plan of action, reassess the situation and give only one more semester as a final semester. At the end of this semester either He/she should come through and re establish his/her credibility or, in the alternate situation of his/her remaining unresponsive, He/she will be required by ACB to leave the Institute. (g) ACB may propose entirely at its own discretion as an alternative to leaving the Institute, a transfer to a programme which is less exacting and which is less sought after; provided ACB has, before making the offer, obtained a prior concurrence, through timely action, of the appropriate authority who decides on all transfer cases, consistent with conditions attached to each request for transfer. (h) ACB cannot be used as a parking place by the student either to stagnate or to postpone the inevitable. The best use a student can make of ACB is to follow its instructions implicitly to rehabilitate himself/herself in his/her own programme, failing which seek a berth in a programme with which he/she

can cope or leave the institute before any further loss of time. In any case, while He/she is in ACB he/she has simultaneously to remove his/her backlog, overcome the afflictions of clause 5.02 and still move forward as stipulated in these regulations, through a combination of operations as instructed by ACB. All instructions of ACB must be taken as conditions to continue in the Institute in order to fulfil the task within the semesters assigned for the purpose. ACB will be under no obligation to either lay 31 down any probationary condition or to obtain a written guarantee. Every instruction, stipulation and condition laid down from the first day would be binding. ACB consistent with the basic principles of these regulations and policies enunciated in clauses 5.01 to 5.04 can devise internal procedures of its own; but in the overall interest of the student and academic standards of the Institute, ACB will have to come to concrete decisions without undue loss of time or without a prior obligation to go through a sequence of steps. In order to meet these objectives ACB may use the instruments of revision of registration, if and when required, even sometimes after the grades are awarded. 5.05 If however the student is not responsive to the efforts of ACB, ACB is authorised to require the student to discontinue from the Institute. 5.06 To be effective, ACB will need the necessary time in order to establish proper coordinates with the student and his/her teachers. Therefore, the mere fact that ACB has not been able to counsel or act before the date of registration does not preclude it from intervening after registration. 5.07 Once a student has been placed under the purview of ACB, He/she would continue to be under its direct guidance until ACB, after being satisfied with his/her overall progress and performance, declares him/her to be outside its purview. 5.08 All decisions of ACB shall be final. 5.09 As far as the minimum academic requirements of the Ph.D. programmes are concerned, refer to clause 8.35. 5.10 As far as the minimum required academic standard and the academic monitoring of students of Off-campus, Work Integrated Learning and Collaborative Programmes are concerned, refer also to clauses 10.24 and 10.25. 5.11 6. Some Special Courses and Programmes To capture a special educational flavour and goals of the various programmes the structures provide for certain courses which must be pursued only after certain academic base has been achieved. To ensure these objectives, the registration and operation of these courses are to be specially regulated. While the features, of these regulatory procedures are described in the following Clauses, it is to be noted at this stage that these courses and programmes have not only been a hallmark of the Institute's innovative thrust but they diligently span the campus and the professional world. Therefore, apart from the routine operation, even though unusual, a theme and vision have to be continuously nurtured and expanded to meet this unusual challenge and responsibility. Dean PS is overall in-charge for Practice School courses and will cause all that has to be done within the framework of these regulations to sustain and move further in these tasks. Dean WILP is in-charge of all off-campus Programmes (see section 10 for details). Similarly, Dean/Associate Dean AGSR who is in-charge of Thesis-Seminar, Dissertation will make all efforts to move into mission-oriented interdisciplinary research of national relevance conducted in the campus as well as outside the campus and take all necessary steps to give meaning and shape to the Institute's vision. 6.01 (a) Practice School Courses 32 PS and TS

are alternative options available in the integrated first degree programmes and PS and dissertation are alternative options in the higher degree programmes. The PS option of integrated first degree programmes consists of two courses PS I and PS II. These courses form a controlled simulation of the real life whereby the circumstance of a link with environment is created. They require that students undergo the rigour of the professional world in form as well as substance, thus providing them an opportunity to apply their classroom knowledge to live situations. In all PS courses also the concept of continuous evaluation enunciated in clause 4.05 will be followed. Since the educational processes in the PS courses seek out and focus attention on many latent attributes which do not surface in the normal class room situation, the process of evaluation in the PS courses should be designed with care so that information on a continuous basis on the following attributes becomes available: intellectual ability; team work; leadership; initiative; personality; professional judgment; common sense; problem solving ability; sense of responsibility; decision making ability; art of guestimation; punctuality; ability to meet deadlines; ability to communicate through oral and written presentations; etc. Each student will also be given at the time of graduation a Practice School Transcript which contains, among other things, a rating sheet summarising the assessment of the student's professional personality obtained by the above process by the PS faculty resident at the practice station. PS I can be taken by a student of first degree programme normally after prior preparation visualised in the Bulletin. PS II, however, can be taken by such a student only after all named courses (including PS I) of the programme have been cleared. Regarding the prior preparation for PS I and PS II in the dual degree schemes, and PS for higher degree programmes see clause 3.14. While registering for any PS course no student can simultaneously register in any other course. The normal duration of PS-I is about 8 weeks and PS-II (or PS for HD students) is about 22 weeks. Since the duration of each of these PS components is closely intertwined with various practical difficulties including the dynamics of the business in the practice school stations, the actual duration, starting and ending dates are worked out within the above broad guidelines taking all aspects into account in each academic year. To accommodate these durations of the practice school components, a substantial portion of the summer term of the academic year is utilized along with the semester time. Hence, it is the responsibility of the students with PS option to make himself/herself available for PS-I/PS-II strictly as per the starting and ending dates prescribed in the calendar for each academic year, failing which he/she may be moved out of the PS option. The decision of the Dean PS is final in this matter. Dean PS has the authority to assign PS courses appropriate term/semesters at various PS stations. Even when He/she asks for options and choices from the students his/her decision in these matters shall be final. In view of many practical difficulties Dean PS is further authorised to advance/delay PS I by one year just as he/she has the authority to advance/delay 6.02 6.03 6.04 6.05 6.06 6.06a 6.07 6.08 33 PS II by one semester as seen from the point of view of a particular student. But acting within his/her authority Dean PS will have to take note of the fact that a specific prior preparation for the Core Courses is prescribed for PS option which includes PS I. Thus when he/she delays PS I, he/she may have

to simultaneously authorise that the counting of the prior preparation in the case of Core Courses in such a case would not include PS I. Likewise, to accommodate admission with advanced standing with PS option or a late transfer into the PS option, Dean PS may have to give the same dispensation. If delay of PSI/PSII occurs due to student's own inability to follow up on the allotment because of illness or any such genuine reason then, while the same dispensation as above can be given by the Dean PS, He/she may also take this case separately, if the situation so warrants, in the further allotment procedure. If a student disregards the allotment of any PS course at the time made by Dean PS for him/her, He/she may forfeit the PS option entirely. The consequential effect of such an event will be to seek transfer to Thesis/Dissertation option as the case may be. In view of the preponderance of the PS option, all students admitted to the various integrated first degree and higher degree programmes may be allotted to this option. Any student of the integrated first degree, however, is free to move out of this option and seek, from Dean PS, a transfer to the Thesis option before he/she is allotted a seat in PS I. If a higher degree student wants to move out of the PS option, he/she should seek the transfer no later than the completion of the first semester of his/her degree programme, through Dean PS. Once Dean PS gives his/her permission, the case will be referred to Dean/Associate Dean, AUGS (first degree case) or Dean/Associate Dean AGSR (higher degree case) for transfer to the Thesis/Dissertation option. The usual rules of transfer will operate (see section 7(d)). The decision of Dean PS in this matter will be final. If a student wants to move out of the PS option after attending PS I, He/she should seek the transfer not later than the completion of one semester after PS I, through Dean PS. After the above date, it would normally not be possible for a student to seek such a transfer except where Dean PS agrees to the transfer in view of extenuating circumstances. A student who has once opted out of the PS option should not expect automatic permission to get back to the PS option at a later stage unless He/she satisfies Dean PS that these actions of opting out and seeking to opt in are based on bonafide reasons. Since the PS programme interfaces with the world outside the campus and is heavily committed, whenever the progress of a student in any PS course is found unsatisfactory and his/her conduct unworthy of the professional world, He/she may be required to discontinue from his/her programme with PS option without any reasons being assigned. However, He/she will be free to seek a transfer to the Thesis/ Dissertation option as soon as possible. His/her current registration will be cancelled and the grade sheet will show DP (see 4.20 (e)). A dual degree student who is required to discontinue from a PS course at anytime will thereafter have to complete his/her degree(s) with thesis option only after taking necessary actions for his/her transfer to the thesis option. 6.09 6.10 6.11 6.12 6.13 6.14 34 (b) Thesis-Seminar, Dissertation, Project Work, Project, Design Project Before registration in Thesis a student must complete the prior preparation which differs from tier to tier. In the first tier a single degree student must have cleared all named compulsory courses – this will include all named courses in General Institutional Requirement and all Discipline Core courses. Regarding the registration in Thesis for students in the dual degree schemes see clause 3.14. In the second tier a student should normally have cleared all other

courses before He/she registers in Dissertation. In the third tier He/she should have completed the requirement of clause 8.13. (a) (b) (c) (d) A Ph.D. student registering in Thesis cannot be simultaneously registered in any other course; this rule will apply even when a student is registered in the Thesis course or the Seminar course in the decoupled situation of clause 6.17. Exceptions to this rule are the courses mentioned in clauses 8.08& 8.10, applicable to Ph.D. students Concurrent registration in Higher Degree Dissertation with appropriate number of units for higher degree along with other courses may be permitted by DCA of the Department concerned. (see clause 1.08(a)). In specific cases of Higher Degree programs, Dissertation with an extended duration is explicitly mentioned in the semester-wise chart for the program. In such cases students may opt for the same wherein coursework requirement may be reduced (in number of courses and units) as per the chart in compensation for increased units for Dissertation as stated in the chart for the program. However such a decision should be made by the student in the semester prior to the start of the Dissertation in concurrence with the supervisor(s) of the Dissertation and the Head of the Department. Concurrent coursework may be permitted during Dissertation only as stated in the chart for the program. A first degree student opting for a Thesis has two options: (i) register for a 16 units Thesis, in which case the student cannot be simultaneously registered in any other course; or (ii) register for a 9-units Thesis, in which the case it may be necessary for the student to take additional elective courses to meet graduation requirements (see clause 6.16(d)) and He/she may be permitted to register in courses simultaneously with the Thesis (see clause 6.16(e)). Graduation requirements for a first degree student includes Thesis (16 units) or Practice School I (5 units) and Practice School II (20 units) for each program the student is pursuing. (i) If a single degree student opts for a 9-units Thesis, he/she must complete at least 2 additional elective courses (of at least 6 units) to meet graduation requirements i.e. the Open Electives requirement of such student is assumed to have increased to at least 7 courses and at least 21 units. If such a student pursuing a 9-units Thesis has completed PS-I, the PS-I course and the corresponding units may be accounted towards the modified Open Electives requirement. (ii) If a dual degree student opts for a 9-units Thesis for either one of the two degrees, the modified Open Electives requirement would apply. And as the discipline electives requirement of either degree is accounted as open electives for the other degree in a dual degree program, the student 6.15 6.16 35 would be deemed to have satisfied the modified Open Electives requirement if the total number and units of discipline electives from the two programs exceed 7 courses and 21 units respectively; if not the student may have to complete additional electives to complete this modified requirement. Of course, if a dual degree student is opting for PS-II in neither of his two degrees but has completed PS-I, He/she may account the PS-I course and the corresponding units towards the modified Open Electives requirement stated above. (iii) If a dual degree student opts for a 9-units Thesis for each of the two degrees He/she is pursuing the Open Electives requirement would be assumed as at least 9 courses and at least 27 units; And the student would be deemed to have satisfied the modified Open Electives requirement if the total number and units of discipline electives

from the two programs and those of PS-I (if completed) exceed 9 courses and 27 units respectively. (e) A first degree student registered in a 9-units Thesis may be permitted to simultaneously register in at most 3 courses of at most 9 units total. Such courses are normally accounted under Open Electives category. Thesis and Seminar courses are permitted to be decoupled in the following situations: (i) (ii) (iii) when, his/her thesis and Seminar get separated because of the operation of consequential action of NC report on one of them while there is no need to register in the other (see 4.20 (d)); when, in the case of a Ph.D. student, he is required to register in Seminar even before he is allowed to register in the Thesis course (see 8.16 (b)); When, in the case of a Ph.D. student, he/she has been specially permitted to register during the summer term. Whenever a programme does not visualise Thesis or Seminar to be time bound, the time schedule is made elastic until the original tasks in these courses are completed. In such a situation, after the units attached to each course have been fulfilled the student will register in these courses for units as per clauses 8.16 (b) & 8.22. When Dean/Associate Dean, AGSR is satisfied that the organisation of the Seminar is not feasible, the student will register in Independent Study in lieu of Seminar for the same number of units. In the first two tiers, a student is assigned a topic of research as well as his/her supervisor by DCA giving due consideration to the student's preference, the research goals of the Institute, and the equalisation of the work load of the supervisors. The decision of Dean, AUGS (first degree thesis case) and Dean, AGSR (higher degree dissertation case) shall be final. While the student has to be in residence throughout the duration of the programme on the campus, Dean, AUGS/AGSR may, however, require him/her to do part or whole of his/her thesis course at any off- campus centres. However, a supervisor of the candidate must be from the Institute. For the purpose of these regulations, the thesis/dissertation is defined as a coherent document that embodies the investigations on the completion of the work 6.17 6.18 6.19 6.20 6.21 6.22 36 and which has been prepared with the approval of the supervisor and which is ready for submission to the examiners. In the first two tiers, the student must submit to DCA, two typed copies of his/her thesis/dissertation (along with its soft copy) which should also incorporate a certificate from his/her supervisor stating that the work has been completed to the satisfaction of the supervisor. The thesis must be written in English. For submission of the thesis in the third tier and for the language in which it should be written see clauses 8.12. The Thesis/Dissertation course in the first two tiers are visualised to be a time bound activity and must coterminate with the successful completion of the assigned units. The submission of thesis/dissertation must take place within the prescribed time failing which, the registration in the last course will be cancelled and his/her grade sheet will show RRA against the course. A student will be required to register for the same number of units in the thesis course for which the registration was cancelled (see 4.18) and for the dissertation course the number of units will be decided by DCA. For the purpose of evaluating the thesis/dissertation in the first two tiers, DCA will appoint a panel of examiners (not exceeding two) of which the supervisor will be one member. This panel will examine the thesis/dissertation, conduct the viva and recommend a grade as prescribed in these

regulations within the specified time. For the third tier see clauses 8.28 to 8.34. For details of operation of Ph.D. Thesis also consult Section 8 of these Regulations.

### 7. Flexibilities

The various educational programmes of the Institute are distinguished by structural and operational flexibilities to meet as far as possible many worthy goals in a practical way. These regulations make an attempt to convert the concept of flexibilities to reality. All these benefits are to be shared with responsibility and goodwill. It is therefore necessary to enumerate at least some of these flexibilities and describe, where necessary, the broad guidelines in their operation. These flexibilities are: admissions in both semesters, admission with marginal deficiency, admission with advanced standing, transfer, dual degree assignment, admission to a minor program, the option of Thesis/Practice School, electives, repetition of courses, amendment to original registration (withdrawal, substitution), departure from normal pace, auditing of courses, summer term offerings etc. These flexibilities need an administrative decision either through an admission process and/or a registration process. It is to be clarified that any transfer or dual degree assignment will be treated as an admission process. Enjoyment of a flexibility involves acceptance of a responsibility both by the recipient as well as by the donor. This contract must be understood if the system with these unique features is to continue to serve the student and the educational system. However, when a student who is under the purview of ACB becomes a candidate for any of the flexibilities such as dual degree and transfer, the Chairman of ACB will be requested for a full report on the student together with useful comments, before the case is processed for award of the flexibility, irrespective of 6.23 6.24 6.25 7.01 7.02 37 the fact that the student might have been promised such a flexibility at the time of admission. While this promise, if any, will certainly be redeemed, the actual implementation of the flexibility may have to be delayed in order for the student to improve his/her academic standing to cope with the additional burden. The various flexibilities are permitted to be worked out on the basis of broad as well as detailed conditions presented in these regulations as well as in the Bulletin. After implementing these flexibilities, the actions will be reported to the Senate specially in connection with admission with advanced standing, admission with marginal deficiency, special type of admission in the Ph.D. programmes, award of dual degree programme, decisions on transfers, outcome of ACB actions, offerings of summer courses, etc.

(a) Admissions in both semesters

The Institute makes admission in both the semesters depending upon availability of seats and facilities. In the case of first tier of the formal system the bulk of admissions are made in the first semester. In view of the available structural flexibilities it may be possible to accommodate a small number of equally competitive students in the second semester also, thus making feasible a unique feature of the Institute, namely, admission in the second semester. But there is no guarantee that second semester admissions will always be made.

(b) Summer Term

As already emphasized in clause 1.02, the only obligation the Institute can recognise during the summer months is to conduct PS and other such courses shown in semester wise pattern, Internship for students who had fulfilled the prior preparation to register in the same. Even in the discharge of this responsibility the Institute has to engage a large number of teachers who

are detained for summer duty to meet the commitments of the above courses conducted in various parts of the country. However, by further stretching all resources and by a great imposition on teachers, the Institute has been disposed towards accommodating under certain conditions, through summer term, few courses for the benefits of students (see 1.03) may be able to graduate in that summer term. Since overtaxed resources have been already stretched, the Institute will have to ensure that proper use of the summer term is made by these students. Even these courses will be cancelled if the clientele for which these courses were offered withdrew later. Even this position will be continuously reviewed to ascertain whether these students ultimately will benefit in graduation in minimum possible time. Once it has been decided, under the above limited voluntary gesture, to offer a set of summer courses, the students outside the above clientele may also be permitted to register in these courses provided the conditions of registration as prescribed in these regulations can be fulfilled by them for any of the courses thus being offered. In this connection it is to be clarified that during the summer term no entity called (PSC) or (OPSC) exists. By the same token backlog cannot be expressed in terms of (OBL). All backlog has to be only expressed in terms of (BL). However, if backlog courses are available the rule regarding (BL) being the first charge will apply. It is also to be remembered that the offering of these courses has been purely fortuitous so far as the other students are concerned and also that they can take only upto three 7.03 7.04 7.05 7.06 7.07 38 courses. Such a student can register in these courses as a repeat or as a backlog. If the course happens to be a higher level course for a student, He/she can register in it only if He/she had no backlog at the end of the previous semester or He/she had only one backlog which He/she is able to register concurrently with the higher level course in the summer term. Further any amendment to the original registration can be (see 3.26) only done provided subsequent registration continues to be consistent with the above enunciation. While these regulations do not stipulate that a Ph.D. student must register during the summer term, it is really his/her own necessity to so register for purposes of full enjoyment of his/her fellowship. While being sympathetic to this need of the student, the particular course(s) in which He/she will register in the summer term will be entirely at the discretion of Dean AGSR, consistent with the provisions of these regulations. Consistent with what has been stated above, the Institute will be free to amend the procedure for voluntary offerings of courses during the summer term from time to time. (c) Dual Degree Scheme These regulations provide an unusual opportunity to students who are capable of accepting the challenge to work simultaneously for two degrees out of the integrated first degree programmes, subject to the structural harmony defined in terms of Groups of programmes (see 2.02 & 2.03), subject to the Institute's announcements from time to time and subject also to the fact that dual degree is a competitive admission process. Once a student is admitted to the dual degree scheme his/her semester wise pattern for the single degree will be replaced by another semester wise pattern which is composite but unique to the specific combination of the two programmes. The principle by which the composite programme is worked out is described thus. The General Institutional Requirement and two sets of the Discipline requirement (one for each of the two programmes) constitute the basic

requirement of the composite programme. On this basic requirement is superimposed the PS and TS requirement for the two programs. All these courses are now properly interspersed and resequenced to form the dual degree programme. Thus in every dual degree scheme normally one degree would be with PS and the other with TS. However, if a student of the dual degree programmes wishes to do PS for the second degree also, the PS Division may accommodate his/her request, if feasible, after accommodating all students doing PS for the first time. As a logical consequence a student may be allowed to do both degrees with thesis. The Open Electives requirement is considered to be subsumed by the combination of the two sets of Discipline Electives. The dual degree composite programme contains, among the compulsory courses, PS, TS (or both PS or both TS as per clause 7.11), all General Institutional Requirement courses excluding Humanities Electives, and the union of Discipline Core courses for the two degrees. Thus courses common (or courses marked equivalent) between the two sets of Discipline Core courses need be completed only once by the student. Clauses 3.14 and 3.15 prescribe a prior preparation required before a student can take any of these courses (see 2.03). A student in the dual degree 7.08 7.09 7.10 7.11 7.12 39 composite programme cannot account a Discipline Core course of one his/her degrees as a Discipline elective for the other degree; He/she cannot account any course as a Discipline elective course in two disciplines. The student in the dual degree would be free to make a request to which degree He/she wishes to attach the PS component in order to call it a PS degree and to which He/she wishes to attach the Thesis component. This option must be expressed immediately after the completion of PS I but not later than the end of one semester after PS I. If the student neglects to take this advance action Dean PS will draw up the linkage. The decision of Dean PS shall be final. However, this attachment selected by the student or assigned by the Dean must conform to the basic condition that TS or PS II of either of the two degrees in the composite programme must be done only after the corresponding Core Course(s) of the same degree has been cleared. It is to be noted that whenever a student has been unable to clear PS I at the appointed time, it may become too late for him/her to exercise this option and the allocation of PS and TS will be contingent on his/her ability to complete the prior preparation for these courses. It would be obvious from clause 7.11 that the composite programme in the dual degree scheme cannot be separately completed for each degree. Thus only when a student has completed the entire composite programme He/she fulfils the requirements of graduation for the two degrees in the scheme. Consequently the divisions awarded for these two degrees would be the same. Once a dual degree permission has been given the student must work according to the scheme and semester wise pattern applicable to the particular dual degree combination. For the frequently occurring combinations of dual degree scheme, the semester-wise patterns are given in the Bulletin. Any willful departure from the scheme without prior permission from Dean AUGS may entail the cancellation of the dual degree facility. In such a case the student will be transferred back to his/her first degree. (see also 6.14) For a student in the dual degree scheme, transfer of first or second degree from one discipline to another discipline on a competitive basis is possible keeping in mind the overall educational

objectives. A student in the dual degree scheme is not allowed to drop the first degree and do only the second degree. If a student admitted to the dual degree scheme is unable to proceed with it for any valid reason he/she may submit a written application to Dean AUGS for withdrawal from the dual degree scheme. If his/her request is granted his/her case will be dealt with as a transfer from the dual degree scheme back to the scheme of his/her first degree, subject to current structure and regulations. Whenever a transfer from dual degree to a single degree as visualised in clauses 7.15 and 7.16 takes place after the student has already exercised his/her option visualised in clause 7.13, for the purpose of determining the eligibility for the first degree either the PS option or the TS option may be accepted irrespective of earlier declaration by the student. (d) Transfer The flexibilities of the system provide for transfer which is a movement of the 7.13 7.14 7.15 7.16(a) 7.16(b) 7.16(c) 7.17 7.18 40 student from one goal to another before completion of the first. In actual practice, subject to stipulations given in the Bulletin, the structure provides for a transfer from: one programme to another within the same tier; one optional stream to another within the same tier (PS option to Thesis/Dissertation option and vice versa); one scheme to another within the same tier (dual degree scheme to single degree scheme); a programme in one tier to a programme in a higher tier or its reverse (see 8.33, 8.34, 8.35 & 8.36). Transfer is operated only at the beginning of a semester except where otherwise provided. At the point of transfer the student's entire academic record is scrutinised and the additional courses He/she has to clear after the transfer are determined in the following manner: (i) Out of the courses taken by the student as per his/her academic record, those courses which He/she has already cleared as of the latest performance will form the set called the 'course-mix' from the past. The set of the remaining courses for which there is a performance will be called the 'residual-mix' from the past. The courses of the course-mix as well as those of the residual-mix will now be stripped of any category tag under which they might have been taken. The new programme to which He/she is transferred would have an eligibility sheet which lists all the courses pertaining to that programme in terms of named compulsory courses and elective slots. All the courses in the course-mix will now be exhausted, by allotting them to the new programme in appropriate categories, that is, either in the named category or in the elective category. The residual-mix will be booked for the new programme only against the required named compulsory courses of the new programme. However the residual-mix may be booked for elective of the new programme at the point of transfer at the option of the student. Once all this exercise is completed the courses left in the course-mix together with courses left in the residual-mix will now be referred to as the set of unaccounted courses. Among the unaccounted courses the courses with grades or with NC reports will then be completely frozen as long as the student continues in the new programme or graduates in the new programme. In other words they cannot be booked for any future necessity in the new programme nor can they be repeated. However if an unaccounted course has a latest performance which is a report other than NC, it will not be frozen and it may be allowed to be booked against a future necessity for an elective slot, if any, in the new programme. (ii) In the matter of booking the courses the student will have

the option to name a course from the course-mix of the past against the elective slot in the new programme; it should be obvious that He/she has no other option. (iii) Further his/her entire up-to-date scholastic record including CGPA is carried over at the point of transfer. Any previous event which constitutes part of the sanctions of eligibility of the new situation will now operate. It is obvious that no transfer is possible if a sanction in the old situation has not been properly disposed of. 7.19 41 (iv) Irrespective of whatever has been said above, if later events justifiable by these regulations so warrant the student may be permitted to utilise for credit in future an unaccounted course cleared earlier. (v) Further, whenever a transfer is made the semester wise pattern in his/her new programme would be as per the current Bulletin and for all purposes of these academic regulations (such as 3.21 etc.) his/her date of entry into the Institute would mark the initial semester of his/her new programme. Whenever the same student undergoes more than one transfer, at each point of transfer the provisions stipulated for transfer must be implemented. It may be clarified that through a process of more than one transfer for a particular student, what was operative before the particular point of transfer may become inoperative after this event and vice versa. Since admission to a programme is done on assigned and competitive basis, normally there may not be any scope of undoing the fact of an assigned admission through transfer. However, whenever a student is not able to cope up with the programme for which He/she is admitted, ACB in order to salvage the student may recommend transfer to a suitable programme. Transfer will always be for motivated students from one degree programme to another in the same tier or different tier in terms of limited numbers and will be on a competitive basis. (e) Advanced Standing Whenever a meritorious candidate seeking admission to any programme of the Institute comes with a preparation higher than the minimum entrance qualification prescribed for the programme, He/she is considered for admission at some intermediate stage in this programme under the provisions called 'Admission with Advanced Standing'. If admission is feasible his/her previous academic record will be scrutinised vis-a-vis the requirements of the programme to which He/she seeks admission. If this exercise cannot give a firm conclusion as to which courses of the Institute programme He/she is to be exempted from, specially designed tests will be given to him/her. However, this exercise would be subject to the broad policies mentioned in clauses 7.23 to 7.29 below. Such exemption can be entertained only in respect of courses which are a compulsory package of the new programme. Wherever the new programme provides for a package of electives this whole package has to be done at the Institute. Since the programme structure of the higher degrees is different from that of integrated first degrees in terms of details like compulsory courses, electives, etc., the requirement of a student admitted with advanced standing in a higher degree programme will be worked out on a case by case basis by the DCA (See 1.08(a)) maintaining the standards of the programmes. Further, whenever such an admission is made a student at the time of entry would notionally be placed in a nominal semester in the semester wise pattern as of the current Bulletin and his/her backlog courses would be correspondingly identified (see 3.25 I). As far as the programmes of the first tier are concerned, a basic distinction has to be made at the

entry point between candidates who possess an integrated first 7.20 7.21 7.22 7.23 7.24 7.25 7.26 42 degree of BITS or its equivalent and those whose prior preparation is short of this. Remembering that the dual degree scheme of the Institute is awarded under a competitive situation it would not be possible to gain additional advantage by a route of completion of one BITS degree or its equivalent and admission with advanced standing for another first degree of BITS. In respect of such candidates there shall be no provision of taking electives more than the minimum number required nor that of transfer. On the other hand, a candidate who at the entry point does not possess a University degree or possesses a University degree which is lower than the integrated first degree of BITS would have all the opportunities that are available for a normal student who enters at the starting point of the programme, subject to any restrictions stipulated at the time of admission. For a student admitted with advanced standing into a programme the CGPA/division awarded to him/her at the end of the programme will be based only on the grades of courses taken by him/her in his/her prescribed programme at the Institute. (f) Marginal Deficiency Whenever a brilliant candidate whose prior preparation has been marginally deficient in terms of stated courses/subjects seeks admission to the Institute, he/she may be admitted with the condition that Dean, AUGS/AGSR may require him/her to do additional courses over and above those prescribed for a student with normal preparation. It is, therefore, to be noted that such a student enters the programme with a backlog (see 3.25 I). For a student admitted with marginal deficiency into a programme his/her CGPA/division will be determined on the basis of all courses prescribed in the programme together with such additional courses mentioned in clause 7.30. (g) Audit The facility of taking a course on audit is principally conceived to give an opportunity to a person to update his/her knowledge. It is expected to meet primarily the needs of casual students (not enrolled for a degree). No degree of the Institute can be acquired by merely taking courses on audit or having once taken some courses on audit, offering these courses for credit whenever permissible in these regulations like advanced standing etc. In this connection definition of the word "cleared" given in clause 1.15 will not encompass a grade received for a course registered on audit. There are certain courses amongst the offering of the Institute which are neither part of a programme nor are available through electives. Any student who wishes to take such courses can take them only on audit basis and also on payment of additional fees. Certain courses are not, however, available on audit namely, PS, Thesis, Dissertation, all courses of the M.E. (Collaborative)/M.Phil. (Applied) programmes and other courses specifically so mentioned in the Bulletin. A person who has taken a course on audit cannot, even with a 'Satisfactory' grade, automatically claim acceptance of that course for the fulfillment of requirements of any programme current or future. As and when such a person seeks 7.27 7.28 7.29 7.30 7.31 7.32 7.33 7.34 7.35 43 admission to any degree in the Institute, if that course happens to be a required course in the new programme, he/she will be required to do another course in lieu of the same as identified by Dean AUGS/AGSR, except as specifically provided otherwise in Clause 8.09. The Institute may offer discrete specialised courses on-campus and off-campus on credit basis for the manpower development of a

target population. A student who registers for such courses will be known as an associate student as against casual student (see clause 7.32). On the completion of a course the associate student would be given a certificate mentioning the grade obtained. If an associate student has secured valid grades in various courses in this manner, which together fulfil the requirements of a degree/diploma programme, he/she may, if he/she so desires, seek admission to the said degree/diploma programme to qualify for the same. AGC would finalise the operational details for such associate students.

(h) Minor Programs

Minor programmes are offered in certain areas as options for integrated first degree students with the intent of encouraging them to add focus to their supplemental learning (outside a major area) as well as recognizing and certifying the knowledge obtained in an area that is outside of their major area. A minor option would allow a student to pursue the study of an area or a sub-area through a set of courses but not as exhaustively as required to obtain a degree (i.e. a major) in that area. A student may be admitted to at most one minor program. A student – if he/she chooses to pursue a minor – should declare at the end of the 2nd year that he/she will pursue a specific minor. Each minor program may come with an exclusion Clause stating that students from certain programs are not be eligible to pursue that minor. While the option of a minor program is available to all first degree students, the Department(s) offering a minor program may stipulate additional input restrictions on the basis of academic performance of the student. In particular, the overall CGPA and/or grades in specific courses relevant to the minor program may be considered for admission to the minor programme. Such criteria will be stipulated by the Cross Campus Departmental Committee(s) for Academics for the Department(s) offering the minor programme. If and when he/she completes the requirements for the minor – as stipulated above and as stipulated for the specific minor, then he/she may apply for a “minor” certificate. If the requirements are met, then he/she will be awarded a “minor certificate” (separate from a degree - i.e. major - certificate). A minor certificate will be issued only on completion of a degree (i.e. a major) i.e. a student may graduate without a minor but cannot graduate without completion of a degree (i.e. major). If a student declares to pursue a minor after the end of his/her 2nd year, the award of his/her minor programme may get delayed depending on offering of the requisite courses and their availability. Each minor program defines a minimum number of courses and a minimum number of units as required to complete that minor. Each minor program also defines a certain set of courses as core – and therefore mandatory – for that minor and a pool of 7.36 7.37 44 electives from which a student may choose courses to complete the requirements. A student may use at most one project / seminar type course to meet the elective requirements of a minor. Overlap requirements:

- At most 2 courses (and at most 6 units) out of the above requirement (of 5 courses and 15 units) may be met by mandatory courses of the student’s degree i.e. major (or degrees i.e. majors): i.e. from the general institutional requirement (excluding Humanities requirement) or the (Major) discipline Core(s).
- There is no restriction of overlap requirement on electives (i.e. discipline elective or open elective or humanities elective).
- No course may be used to meet the requirements of two different minors nor may a course be used to the

meet the requirements of two majors and a minor. 8. Additional Clauses for Ph.D.

Programme Creation of Departmental Research Committee (DRC) Each Department will have a "Departmental Research Committee" (DRC), consisting of Head of Department (HOD) as ex-officio member and chair-person, and 4 to 8 faculty members, at the level of Assistant Professor and above, who are active in research. The size of DRC may depend on the number of faculty members in the Department. One of the members will act as its convener. The term of DRC will be of two years. DRC will be approved by the Director of the campus on the recommendation of HOD. The role of DRC will be in executing operations from admissions to final thesis submission that are outlined in each operation mentioned below. Ph D Admissions: Admission to the Ph.D. programme is, in the first instance, provisional. The admission is formalized after the student passes his/her Qualifying Examination. The various components of the programme are: Course-work, Qualifying Examination, Foreign language, Teaching Practice/Practice Lecture Series/ Research Methodology, Thesis, and Seminar/Independent Study. It shall be the responsibility of the student to ensure, through timely actions, that he/she satisfies the requirements of all the components of his/her programme. Throughout the duration of the programme a full-time Ph.D. student must be in full-time residence in the campus/PS stations and off-campus centres of the Institute or at outside centres as permissible in the rules. A part time Ph.D. student will visit the respective BITS Pilani campus, where he/she is registered for regular interaction with supervisor/co-supervisor and present his/her research progress. Input To obtain a better understanding of the subsequent handling of cases, various possible inputs to the Ph.D. programme are classified according to backgrounds. These are: (a) the preferred input, namely, a student coming with a higher degree of the Institute or its equivalent; (b) a student coming after clearing all or part of the coursework of a higher degree of the Institute or its equivalent without completing 8.01 8.02 8.02a 45 the degree; (c) a student who enters with an integrated first degree of the Institute or equivalent; (d) a student who enters the Ph.D. programme after passing Qualifying Examination as per clause 8.44 (e) a student, under faculty development, who enters the programme after passing the Qualifying Examination as per clause 8.40 (f) a Scientist, Engineer or professional belonging to collaborative, or other sponsoring organisations. (g) a person working in a reputed research organization, academic Institute and Industry, situated preferably in the close vicinity of one of the campuses of BITS Pilani, can be admitted on part time basis provided (i) the candidate is working in an organization which encourages and facilitates research (ii) candidate meets the requisite minimum qualification for admission to Ph. D programme of BITS Pilani as mentioned in (a), (b) or (c) (iii) candidate has minimum of one year work experience in related field, and (iv) candidate furnishes a "consent & no objection certificate" from his/her parent organization. Each case once accepted would be treated under any of the above items consistent with his/her background. For each candidate admitted to Ph.D. programme, the DRC will recommend a notional thesis supervisor or mentor on the basis of department need and student's area of interest. Further, for each Ph. D student, the DRC will in consultation with the notional supervisor of the students, appoint two additional members for a Doctoral

Advisory Committee (DAC). However, for student in interdisciplinary area, there can be DAC member(s) from other department/campuses based on Topic of Research. Student will be monitored by notional supervisor of the department. DAC may counsel the student throughout his/her programme. Course work For students with first degree, depending upon the student's qualification and background, the DRC will, in consultation with the student's notional supervisor and DAC members, prescribe course work. The minimum number of courses shall be six with minimum of 24 units. Candidate should not obtain less than D grade in any course and should have minimum CGPA of 5.50. If less than D grade is obtained, course should be repeated. On obtaining less than D grade in more than one course or CGPA less than 5.50, and if the student fails to bring it up to 5.50 within two subsequent semesters, student shall be discontinued from the programme. Students with Higher Degree may also be required to do course work if he/she is working in different area than his/her area of Higher Degree or having less than 6 courses in his/her Higher Degree. Number of courses will be decided by the notional Supervisor and DRC members in order to prepare the candidate to undertake research in chosen area. Number of courses can vary from 0 to 6.

Qualifying Examination Before undertaking registration in Thesis, every student must pass the Ph.D. Qualifying Examination within the prescribed time, namely, two semesters (excluding summer term) after admission for students who are not required to take any course work out of the first kind of course-work and two semesters (excluding summer term) after clearance of courses prescribed by DRC. However, DCC is authorised to examine the needs of candidates on case by case basis and give additional time wherever needed.

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46 (a) As soon as a student has cleared the courses prescribed by the DRC covered in the first kind of course work, he/she should make a formal application to DRC for permission to appear for the Qualifying Examination.

8.06 (b) For each student, qualifying examination will be conducted in two areas from the list of qualifying examination areas approved for the department. One of these must be in the area in which he/she proposes to undertake research. The list will be available with Dean AGSR which can be modified by the joint recommendation of DRCs of the campuses. With the increasing emphasis on multi-disciplinary research, PhD student can also choose one relevant area from departments other than his/her own department in consultation with notional supervisor. The candidate selected under (e), (f) or (g) of clause 8.02 will also follow the same pattern of qualifying examinationas mentioned in clause 8.06

8.07 A student who has passed the Qualifying Examination will be formally admitted to the Ph.D. programme. His/her registration in the Thesis course can be allowed only after the Research Proposal is approved and fulfilment of the of clause 8.13.

8.08 If a student fails in the Qualifying Examination or fails to appear in the same in the first time, he/she may, at the discretion of DRC, be allowed to appear at this examination only once more, provided he/she does so within the time limit prescribed in clause. It shall be the responsibility of such a student, to approach DRC immediately, for permission to take the Qualifying Examination once more. If this permission is denied, the student will be considered to have come under clause 8.38.

8.09 The Qualifying Examination will test the student's knowledge, grasp of fundamentals and his/her ability to use them in

unknown situations. The Qualifying Examination will normally consist of written and oral tests. The oral test will follow the written papers and will attempt to probe the student further with reference to his/her answers in written papers and to test his/her presentation of ideas and concepts. 8.10 The Qualifying Examination will be conducted by respective DRC in every campus. 8.11 Language Requirement Every Ph.D. student is normally expected to demonstrate an ability to translate a piece from current periodicals in the area of major interest of the student in one of the modern European languages into English with the help of a dictionary. The modern European language will be named by Dean AGSR and may vary from student to student depending on his/her intended area of research. It will be in the interest of the student to complete the language requirement as soon as possible. However, the Dean AGSR may waive the language requirement for a student if the Supervisor and DCC recommend that English is adequate for the intended research work. 8.12 47 8.13 The language requirement, if not waived (see clause 8.12), can be fulfilled by any one of the following alternatives: (i) If the student, before entering into the Ph.D. programme, has already done the prescribed foreign language course(s) of the Institute or its equivalent elsewhere and has obtained the minimum grade as prescribed by Dean AGSR, he/she would be pronounced to have fulfilled the language requirement of the Ph.D. programme. (ii) Where a student has no previous exposure to the prescribed language, he/she will take the prescribed Institute course(s) on audit and obtain 'satisfactory' grade(s) in such course(s). (iii) Where a student has learnt the prescribed language through self-study and claims that he is equipped to fulfill the language requirement, he/she should sit in a specially designed test to demonstrate the above mentioned ability. If he/she fails to pass the test, he/she may try again or take the special courses offered in the Institute as per the decision of Dean AGSR. Whenever a student plans to work for a Ph.D. in any Indian language/literature, Dean AGSR may decide to exempt him/her from the above European language and require him/her to show his/her ability in an Indian language other than the language in which he/she proposes to pursue his/her Ph.D. research. In this case, Dean AGSR will be guided in his/her decision by the spirit of clauses 8.12 and 8.13. Teaching Practice/Practice Lecture Series Teaching Practice I or when it cannot be arranged, its alternative Practice Lecture Series I should be completed. These courses are normally registered immediately after admission or after completion of prescribed coursework. These courses attempt to train a Ph.D. student in the art, methodology and skill of teaching, communication, etc. Research Methodology: Research Methodology I course should be done in the semester/term following the semester of completing Teaching Practice I/ Practice Lecture Series I. This course is designed to impart training in analysis of research problem, mathematical and statistical analysis of data, experimental techniques etc. Students who have done this course in their higher degree or students who have done Teaching practice II/Practice lecture series II will be exempted from doing this course. Seminar/Independent Study (a) (b) Clauses 6.15 & 6.19 on concurrent registration in Seminar (whenever Thesis is registered for) and registration in Independent Study as an alternative to Seminar, when the same cannot be arranged, also apply to the Ph.D. programme. In addition, a Ph.D. student is required to

register in Seminar/Independent Study, starting from his/her first registration in the programme. Further, the total number of units assigned to these courses can be taken only one unit at a time in a semester/term until the units are exhausted, after which the student will register for one unit every semester. However, while he/she is doing one 8.14 8.15 8.16 48 or more courses of the First kind, he/she may not be required to register in Seminar/Independent Study unless specifically directed to do so by Dean AGSR.

**Topic of Research and Supervisor:** Once a Ph D student clears the required qualifying examination, he/she, in consultation with his/her notional supervisor will decide upon the topic, the supervisor, co-supervisor (if required), prepare a research proposal and present it in writing and orally before the DAC members. For PhD students admitted under "part time" or under PhD aspirant scheme, it is mandatory to choose BITS faculty as supervisor. The DRC will carefully evaluate whether the proposed topic of research is in consonance with the Institute's research goals, the facilities existing in the Institute or in the permitted locale for carrying out the work, the suitability of the proposed supervisor for the particular topic of research, the number of students already working under him/her and other relevant factors; and will forward the proposal to Dean AGSR. Dean, AGSR in consultation with Doctoral Counseling Committee members will approve the research proposal. A student can take up research only on a topic and under a supervisor at a locale approved by the Dean, AGSR. Any change in the topic of research/supervisor/co-supervisor or locale of work can be made only with the prior approval of the Dean, AGSR. It shall be the responsibility of such a Ph.D. student to approach the Dean, AGSR through respective DRC well in time for a fresh decision on the question of supervisorship, if there is a likelihood of his/her ceasing to be a faculty member of the Institute or ceasing to be associated with a professional organisation. If no decision of the Dean, AGSR is available on the matter, his/her current semester/term registration in Thesis will be cancelled as soon as he ceases to be a faculty member or a professional and he will not be allowed to register subsequently unless the Dean, AGSR decides on the matter. Thesis The student will register for Thesis only after the topic of research and supervisor have been approved by the Dean AGSR. The total units assigned to this course in the Bulletin will be distributed over several semesters/terms as determined by Dean AGSR. After the student completes the unit requirements of Thesis, he will be required to register every semester thereafter for 10 units till the submission of Thesis. The title of the thesis will be recommended for approval by the DCC which will subsequently be approved by Dean AGSR. Any change in the title of the thesis can be made only with the prior approval of the Dean AGSR. The thesis should be written in English; provided that a thesis for a Ph.D. degree in any Indian language may be written in that language or in English. 8.17 8.18 8.19 8.20 8.21 8.22 8.23 8.24 Submission of thesis 49 (a) (b) On completion of research, the student will prepare a draft of the thesis and its synopsis for preliminary but detailed evaluation by two members of DAC followed by oral presentation. A student must submit his/her final thesis to Chairman, DRC within ten semesters (excluding summer terms) to be counted from the semester following the semester of passing the Qualifying Examination. Whenever a student fails to submit his/her thesis within this

stipulated time, he will come under clause 8.38. The duration for submitting final PhD thesis (including all extensions and semester withdrawals) is limited to 14 semesters to be counted from the semester following the passing of PhD qualifying examination. If a candidate fails to submit his/her final thesis during this period, he/she will be discontinued from the programme. The female candidates who have availed maternity leave during this period may be given one extra semester for thesis submission. In exceptional cases where the progress of PhD thesis has been affected by circumstances beyond control of the student like extreme medical condition or trauma, being on National duty (if the candidate is from the armed forces) etc. the duration of thesis submission can be extended to beyond 14 semesters, as a onetime exception for specific semester(s) with the approval of the Vice-Chancellor whose decision in this regard shall be final. The submission of the thesis for the purpose of the above clause will be considered to be in order only when approved by DRC and it has been done in accordance with the clause 8.26 below; otherwise the thesis would be returned to the student for removal of the inadequacy. The submission of the thesis will (a) require fulfillment of the following prior conditions: (i) the semester/term in which the thesis is being submitted is such that the immediately preceding interim grade in the Thesis course is 'satisfactory'; (ii) (iii) (b) the student as of that date, has fulfilled all the requirements of graduation in clause 9.02 except for para (vii), and the student has given reasonable evidence to Dean, AGSR that at the time of/ during submission of the thesis no NC report would emerge causing embarrassment and dislocation of further processing of the thesis; and entail simultaneous forwarding of the following to the DRC: (i) two printed bound copies and one soft copy of the thesis with a title consistent with the requirements of clause (ii) (iii) the thesis must contain a certificate from the supervisor and co supervisor (if any) to the effect that the thesis embodies original work done by the student under his/her supervision. soft copy of synopsis of the thesis as prescribed by Dean, AGSR to facilitate appointment of examiners; and 8.25 8.26 (iv) 50 the receipt for payment of the requisite fees. (c) DRC will forward following documents to Dean, AGSR (i) Thesis (ii) Synopsis (iii) Reports of the DAC members on draft thesis (iv) The receipt for payment of the requisite fees. (v) The list of 6-8 potential thesis examiners based on a list of examiners submitted by supervisor(s) In exceptional circumstances, where a student, who is registered in the last components of the units assigned to Thesis/Seminar and may be also pursuing courses or completing other components of the requirements of the Ph.D. degree simultaneously in a semester, wishes to submit his/her thesis before the end of the semester, he must supply strong evidence to Dean, AGSR that all his/her current pursuits would co-terminate in such a way that conditions prescribed in the above clause would be fulfilled. If Dean, AGSR accepts the thesis for further processing, he does so with the stipulation that he will stop this processing at any stage and even cause withholding of the final Thesis grade until all conditions stipulated in clause 8.17 have been fulfilled. Examination of thesis The thesis will be examined by two examiners appointed by the Vice Chancellor. The examiners will give separate reports, each report concluding with a final and unequivocal verdict on the thesis in terms of only one of the following five alternatives: (i) The thesis is approved for viva-voce examination, as is or

minor corrections suggested, if any, to be addressed adequately by the student and approved by the supervisor(s), or (ii) Thesis is approved for viva-voce examination; major corrections suggested, to be addressed adequately by the student in consultation with supervisor(s) and certified by the Doctoral Advisory Committee, or (iii) Thesis is approved for viva-voce examination; major corrections suggested, to be addressed adequately by the student in consultation with supervisor(s) and certified by the examiner(s), or (iv) The thesis requires revision and resubmission, or (v) The thesis is rejected.

a. If one examiner approves the thesis for viva-voce (verdict i, ii or iii) while the other examiner recommends revision and resubmission (verdict iv), the respective campus Associate Dean, AGSRD will make arrangements to share the two reports with the examiners and the supervisor/co-supervisor(s), and if necessary, convene a meeting among them to arrive at a unanimous verdict. When this process yields no unanimity, then the thesis will be sent for evaluation to a third examiner, appointed by the Vice-Chancellor and the verdict of 8.27 8.28 8.29 8.30 this examiner will be final and binding.

b. If both examiners recommend revision and resubmission (verdict 4), the student will be required to revise and resubmit his/her thesis for re-examination by the same examiners as far as possible.

c. If one examiner approves the thesis or recommends revision and resubmission (verdict i, ii, iii or iv) while the other examiner rejects the thesis (verdict v), the respective campus Associate Dean, AGSRD will make arrangements to share the two reports with the examiners and the supervisor/co-supervisor(s), and if necessary, convene a meeting among them to arrive at a unanimous verdict. When this process yields no unanimity, then the thesis will be sent for evaluation to a third examiner, appointed by the Vice-Chancellor and the verdict of this examiner will be final and binding.

d. If both examiners recommend rejection of the thesis (verdict v), the thesis stands rejected. When the thesis is rejected, the student's registration in the Thesis course for that semester will be cancelled and he will be asked to discontinue from the programme and his/her grade sheet will show DP against the Thesis course. When a thesis has been unanimously approved by the external examiners, a viva-voce of the thesis will be conducted by one of the external examiners at the respective campus in presence of the supervisor and co-supervisor(s). However, in extra ordinary situations such as a pandemic the viva-voce can be conducted online using technology. The Vice Chancellor is authorized to reconstitute this team when deemed necessary. At the end of the viva-voce, the external examiner in consultation with the Supervisor / Co-Supervisor(s) will award the final Grade.

When a student has been required to revise and resubmit his/her thesis, his/her status will revert to what it was, in all respects, before he submitted his/her thesis but would not alter the original deadline for submission of the thesis. If the current last date of submission of the thesis is considered to be inadequate he/she must immediately request for extra time from the Doctoral Counseling Committee. The revised thesis should be examined as far as possible by the same team of examiners. When a thesis has been approved unanimously by the examiners, a viva-voce on the thesis will be conducted at respective campus in presence of the (i) Supervisor (ii)at least one external examiner, and (iii) Co-supervisor(s), if any. The Vice Chancellor is authorised to reconstitute the team of examiners for viva-voce whenever

deemed necessary. At the end of the viva-voce examination the team of examiners collectively will award the final grade as per clause 4.11, on the Thesis course. In awarding this final grade the examiners will combine the assessment of the thesis with the performance of the student in the viva-voce examination. All his/her records pertaining to the interim Thesis grades would be made available to the team of examiners. In the case of a Ph.D. student, whose viva-voce examination is held during the same semester in which he submitted the thesis, his/her performance in the viva-voce will also be judged for awarding the final grade in the Seminar/Independent Study course and the result for viva-voce will produce the grade for thesis as well as for Seminar/Independent Study. The eligibility will be worked out as soon as the viva-voce result is available without waiting till the end of the semester.

8.31 8.32 52 8.33 However, if at the time of/ during submission of the thesis any NC report emerges the viva-voce will be postponed until this affliction is removed as per the regulations. If however, the viva-voce has been already held the final Thesis grade will be withheld. The viva-voce examination on the Ph.D. thesis will be open to research students, faculty members, staff members charged with similar professional duties and any other person permitted by Dean, AGSR, all as silent observers. Minimum academic requirements for continuation: A student will not be permitted to continue in the Institute under any one of the following situations: (i) (ii) (iii) (iv) (v) (vi) (vii) he fails to take or pass the Qualifying Examination within the prescribed time (see 8.04 & 8.06); his/her CGPA, where applicable, falls below 5.50 and he fails to bring it up to 5.50 within two subsequent semesters and his/her CGPA falls below 5.50 and he/she fails to bring it up to 5.50 within two subsequent semesters (see 8.03); He/she accumulates two consecutive interim 'unsatisfactory' grades in the Thesis course; He/she fails to submit his/her thesis/revised thesis within the time prescribed for him/her, for such submission; his/her thesis is rejected by the examiners; his/her thesis does not receive unanimous final verdict from the examiners as required in clauses He/she receives final grade as 'unacceptable' in Thesis. (a) Of the above seven stipulations the first four, viz, specify the intermediate steps necessitating monitoring for a student before submission of his/her thesis. This monitoring is to be done by the DRC (b) The last three stipulations, viz. specify the events after the submission of the thesis and its examination by the appointed examiners. In such cases a student will be discontinued from the programme. However, he may appeal to the Dean, AGSR for reinstatement giving full exposition and justification for the appeal. If the Dean AGSR decides to reinstate such a student it will give clear instructions and conditions, consistent with overall spirit of these regulations that the student must fulfil after reinstatement. The verdict of the Dean, AGSR shall be final. Doctoral Counselling Committee In all matters where the student has to approach the DCC, applications must invariably be submitted through DRC, who will assist the DCC with supporting documents and their recommendations consistent with these Regulations, Institute's research goals, facilities available and other pertinent factors.

Registration and Monitoring Registration of a PhD student will be done separately by registration cell of each campus on recommendation of Associate Dean, AGSR, who will keep the Dean, 8.34 8.35 8.36 8.37 8.38 53 AGSR informed. Whenever the lack of progress of a

student forewarns the application of Clause or when a student defaults under Clause the student will be guided for his/her registration by the DCC. The DCC will function like the ACB for monitoring the progress of the student. The DCC can give additional time/attempt to pass the qualifying examination; it can prescribe additional course(s) or require the student to repeat course(s) already cleared; it can require the student to drop some semester(s), it can give extension of time for the submission of the thesis. In short, it will take appropriate action to help the student to meet the minimum academic requirements stipulated in Clause as early as possible. The DCC has also the authority to conclude whether a student should be continued as a Ph.D. student or not. The DCC will report its decision to the Senate. Human Resource Development With a view to accelerating human resource development, the Dean, AGSR on the recommendation of the DRC concerned may permit, when possible, a faculty member of the Institute or a staff member charged with similar professional duties to appear in the Ph.D. qualifying examination even though he/she is not registered under the Ph.D. programme. Similarly, the Dean, AGSR on the recommendations of the DRC, may permit professionals (under Ph.D. aspirants scheme) to appear in the Ph.D. qualifying examination even before he is registered for Ph.D. If a candidate mentioned in clause 8.39 passes this examination, he/she has to seek formal admission to the Ph.D. programme to pursue the same as per these regulations. If he/she, however, fails to appear in or pass the examination, he/she can avail of another chance also subject to necessary permission from the Dean, AGSR. However, if he/she fails to appear in the examination on genuine grounds, Dean, AGSR may condone such an absence, on a case by case basis. Research at Outside Centres (a) (b) The Vice-Chancellor may entertain a proposal not covered under clause 6.21 from a student/professional seeking permission to carry out a part or whole of his/her Ph.D. research at a suitable centre outside the Institute, if he is satisfied that the proposal is consistent with the overall educational and research goals of the Institute. If the permission is granted, the student will be registered for the Thesis-Seminar/Independent Study only. These regulations permit, through the scheme of linkage with sister universities or research organisations, the possibility of pursuit of a prescribed portion of Ph.D. work of a student of the Institute in another organisation, as well as of a Ph.D. student of another university pursuing his/her programme at the Institute. The Vice-Chancellor is authorized to implement the above within the general framework of these regulations and report the same to the Senate. Transfer from/to a First/Higher Degree (a) A student of good standing in any of the integrated first degree/higher degrees may be permitted, as a special case, by Dean, AUGS/AGSR to appear in the Ph.D. Qualifying Examination, provided the requirements of Clause regarding course package prescribed by DRC have been completed. 8.39 8.40 8.41 8.42 8.43 (b) 54 A Higher Degree student may be permitted to transfer to Ph.D. degree. Such a student may also be awarded the higher degree on successful completion of requirements of the same, while continuing to be a Ph.D. student. (c) A bright and promising Integrated First Degree student may be transferred to a Higher Degree/Ph.D. degree. Such a student will be automatically awarded the intermediate First Degree(s) and Higher Degree in a concurrent way as soon as all the requirements of the Degree(s) are completed. However, if

a student wants his/her intermediate First Degree/Higer Degree(s) at an earlier time, he/she must opt for it within the semester after he/she completes the requirements of First Degree/Higer Degree(s). In case the CGPA of the transferred student falls below 5.50, he will come under the purview of ACB, which will automatically transfer him/her back to his/her Integrated First degree(s). Further, if a student does not complete the requirements of Ph.D. degree, he may be transferred back at any stage. On passing Ph.D. Qualifying Examination under 8.05, the student may, with the approval of Dean, AGSR, choose one of the following options to get formally admitted to Ph.D. programme. (i) (ii) He/she completes his/her present degree and joins the Ph.D. programme on a date agreed to by the Institute. He/she immediately becomes a Ph.D. student skipping his/her present degree (telescoping). His/her current registration in the First Degree/Higer Degree courses would be revised by cancelling registration in courses which are no longer needed for his/her Ph.D. programme and adding courses which he/she can use for his/her Ph.D. programme. The normal rule of transfer will operate with the further condition that the total requirement in terms of courses and other components for such a student would not be more than what it would have been if he/she was directly admitted to the Ph.D. programme. As far as possible, this formal transfer to the Ph.D. programme should take place in the beginning of a semester. If, however, Dean, AGSR, in consultation with DRC, is satisfied that sticking to the schedule will result in loss of time for the student, he may permit such revision of registration even later than the beginning of the semester. If such a student does not appear in or pass the Ph.D. qualifying examination he/she will be treated in the way described in clause (a) A Ph.D. student may seek from Dean, AGSR a transfer to a Higher Degree programme, subject to the general stipulation that he/she does not already possess the same degree or its equivalent. If such a permission is given to the student, he/she carries forward his/her up-to-date scholastic standing in terms of courses, units, grades, CGPA and any sanctions, to this new programme. (b) Subject to the stipulation in clause above, it is possible for a Ph.D. student who has been required to discontinue under clause 8.35, to seek a transfer to one of the Higher Degrees of the Institute. 8.44 8.45 8.46 55 (c) In both the above cases the transfer can be sought only in the beginning of a semester and only to that Higher Degree which has been notionally identified for him/her. The usual rules of transfer will apply. If this permission is granted, the completed units for various courses and research work wherever feasible may be credited for higher degree subject to case by case examination. The course work requirements of a higher degree may overlap with those of the Ph.D. degree. When a Ph.D. student is doing higher degree courses, he may also be permitted to register for additional requirements of the higher degree and may be considered to be simultaneously a student of the higher degree as well as the Ph.D. degree. He will be awarded the higher degree as soon as he completes the requirements for the same and continue to be a Ph.D. student.

9. Graduation and Eligibility for all Degrees A student is deemed to have fulfilled the requirement of graduation for an integrated first degree (single or dual degree) or a higher degree when He/she has: (i) cleared all courses prescribed for in his/her programme or his/her composite programme, as the case may be; (ii) cleared the total unit requirements of

Thesis, Seminar and Dissertation wherever applicable; (iii) obtained a minimum CGPA of 4.50 in case of First Level Diploma/B.Sc./Integrated First Degree programmes; and CGPA of 5.50 in case of Higher Level Diploma/Higher Degree programmes unless stated otherwise for a particular programmes. (iv) remained outside the purview of ACB or been declared to be outside its purview; (v) overcome all consequential stipulations (see 4.20) of an NC report; except where there if an NC report in an elective course over and above the prescribed number of elective courses or in a course which has ceased to be a part of his/her current programme as a result of the latest transfer operations; and (vi) satisfied all requirements of these regulations. A first degree student admitted to a minor program is eligible to receive a minor certificate if he/she has completed the degree requirements stated above and has: (i) completed the core courses required for the minor and the stipulated number of electives from the pool for that minor (ii) obtained a minimum CGPA of 4.50 in the courses applied to the minor. A student is deemed to have fulfilled the requirements of graduation for a Ph.D. degree when He/she has: (i) passed the Ph.D. Qualifying Examination; (ii) fulfilled the language requirement; (iii) fulfilled Teaching Practice/ Practice Lecture Series / Research Methodology requirement; 8.47 9.01 9.01a 9.02 56 (iv) cleared the total unit requirements, (including additional requirements, if any) prescribed for Thesis and Seminar/Independent Study (see 8.22& 8.16); (v) cleared all prescribed course-work; (vi) obtained, where applicable, a minimum CGPA of 5.50 in coursework; (vii) obtained a final grade in Thesis as 'acceptable'; (viii) overcome all consequential stipulations (see 4.20) of an NC report; and (ix) satisfied all requirements of these regulations and those prescribed by Dean, AGSR. A student is deemed to have become eligible for the degree if, in addition to satisfying the requirements of clause 9.01 or 9.02 as the case may be, He/she has : (i) satisfied all rules of evaluation; (ii) no case of indiscipline or unfair means is pending against him/her. However, in case of a student having outstanding dues against him/her to be paid to the Institute, Hostel or any other recognised organ of the Institute, his/her degree will be withheld until the said dues are cleared. (a) The following classification based on CGPA will be made for integrated first degree programmes: Distinction - CGPA 9.00 or more I Division - CGPA 7.00 or more but less than 9.00 II Division - CGPA 4.50 or more but less than 7.00 Since the B.Sc. degree (for working professionals) also falls under a First Degree programme of the institute, the criteria prescribed for the award of Division for a B.Sc. degree shall be the same as that of other First Degree programmes as specified under 9.04(a) above. (b) No division will be awarded in diploma, higher degrees and Ph.D. programmes.

10. Additional Regulations for off-campus, Work Integrated Learning and Collaborative Programmes While the Regulations described in earlier sections apply uniformly to all on campus and off-campus programmes of the Institute, some additional regulations specifically applicable to the off-campus programmes are stated in this Section. The on-campus and off-campus, Work Integrated Learning and Collaborative programmes are defined in section 1.00. While every on-campus degree programme can be theoretically offered as an off-campus programme through the "Work Integrated Learning Programmes Division" the Institute will decide from time to time, depending upon feasibility and capability of maintaining corresponding standard, which on-

campus degree can be operated as off-campus programmes. However, certain off-campus degree programmes, may not be offered as on-campus degree programmes. Since the 9.03 9.04 10.01 10.02 10.03 57 admission criteria and the operational details may vary between on-campus and off campus programmes, transfer from on-campus to off-campus and vice versa, even for the same discipline/branch, will not be automatic. Whenever in a special situation the movement is permitted between on campus and off-campus degree programmes, the same will not be conceived as a transfer, but will be visualized as a notional readmission with the following criteria: "In the case of a student permitted to move from off-campus to on-campus programmes, the student should go through the competitive methodology employed for admission to on-campus programmes and also satisfy other essential requirements. The students who are permitted to move from on-campus to off-campus programmes have to satisfy the conditions of the work environment in terms of facilities, mentor, etc. As in the case of readmission, the academic credits will be carried over. Further whenever such transfers take place, the degree awarded to a student will be the degree in which He/she is registered during the last semester of his/her graduation". Since the off-campus the programmes invariably require suitable learning environment for the students admitted to these programmes, the Institute will ensure the viability of the physical facilities, availability of other manpower (who could act as mentor/tutor for the students), motivation of students etc. before undertaking to run any such programme. The off-campus programmes will normally be run for students sponsored by their employers after ensuring the feasibility of converting their work environment into a learning environment. The Institute may also decide to run off-campus programmes as a manpower development programmes for the employed professionals. An employed person admitted to any off-campus programme will be treated as a full-time student and a full-time employee simultaneously. However, there are some emerging areas where new manpower may be required necessitating training of fresh students with the help of collaborating organizations towards well defined professional goals. In such cases, the Institute can also admit students who may not be already employed. However, all such students would have access to all the infrastructural facilities and other resources of the collaborating organization where the programme is conducted. All the off-campus programmes will be conducted by the Work Integrated Learning Programmes Division and its Dean will be the deciding authority in the operation of all the necessary activities for the conduct of these programmes, specifically, He/she will be the ex-officio instructor-in-charge for all courses offered for the off-campus programmes and will be in-charge of registration, evaluation and monitoring of the programmes. Wherever necessary, He/she will consult Dean, AUGS/AGSR and Dean PS. The off- campus programmes will be conducted by a team of instructors drawn from the Institute faculty with the active help and participation of mentor/tutor from the host organisation or other organisations in the same locale. The tutor/mentor will guide the students in self-study and serve as a link between the instructor and student on all academic and other related matters. Every student while applying for admission to an off-campus programme has to submit consent of the organisation sponsoring him and also submit a detailed biodata

and consent of the tutor/mentor. Every tutor/mentor have to be approved by the Dean and will be deemed to be a “teacher” of the Institute for the purpose of academic regulation.

10.04 10.05 10.06 58 10.07 Whenever the work environment of a student in any Work Integrated Learning/Collaborative Programme ceases to be viable or when his/her sponsorship is withdrawn by his/her employer, the student may be discontinued from the programme and the Institute will have no further obligation in this matter. Similarly, whenever an organisation, which agreed to collaborate with the Institute for running a degree programme for a targetted population of the organisation, discontinues the facilities necessary for the conduct of the programme, the Institute may cancel such a programme without affording opportunity to these students registered therein to complete their degrees. In such cases also, the Institute will have no further obligation in this matter. Students of the off-campus programmes may be permitted to take underload or have gaps between semesters/terms. In such cases, pace of progress would be suitably computed ignoring such gap(s) and clause 5.02(iii) will be applied accordingly. For a targeted population with an aggregate level of background identified to be of a higher level than the normal input level, certain truncated programmes consisting of courses to be done by such candidates may be formulated. In working out such truncated programmes, which will be deemed to be equivalent to full programmes for the purpose of award of a degree, the AGC may, however, be not guided by a course by course exemption out of a notional full programme as in the case of students admitted on an advanced standing basis. In addition to the general conditions specified in Section 7 of the Regulations for operation of the flexibilities like transfer, dual degree, admissions with advanced standing/marginal deficiency, etc., the following guidelines will be followed. (a) Transfer:Transfers from one off-campus programme to another may be permitted after a thorough examination of such a request on a case by case basis by AGC (see also clause 10.04). (b) Dual Degree: Conceptually dual degrees in the off-campus programmes will not be valid because of their being target population oriented. Even then, on rare occasions, requests for dual degrees may be entertained provided in the corresponding alter-ego programmes in on-campus system such dual degree combinations are permitted. Hence, each request for dual degree will be examined on a case by case basis by the AGC. (c) Admissions with Advanced Standing/Marginal Deficiency: There may be cases for whom admissions may be considered on the basis of advanced standing/marginal deficiency principle even in cases of students admitted to truncated programmes. The work integrated learning and collaborative programmes may have a semester wise course structure with a view to sequencing of the courses. However, such structures would not have the rigidity on-campus programmes' semester wise course structures and as such prior preparation, backlog in registration, etc. will not be very meaningful for the off-campus programmes. The courses like Work Experience, Practice School, Thesis-Seminar, Internship, Dissertation, Project Work, Capstone Project etc., have to be taken normally after completing all other course work. Work Experience, Internship, Dissertation, Project Work, Capstone Project, Project and Practice School courses are not interchangeable even if such courses are 10.08 10.09 10.10

10.11 offered in the same locale. 59 The Institute may enter into collaborative arrangements with industries, R&D labs., universities etc. and may introduce suitable degree programmes in all tiers of education to match the needs of human resource development in host organisations. The Institute may also introduce diploma programmes at the first level as well as the higher level. The Institute may also permit in specific first degree programmes multiple exit points leading to first level diploma or senior first level diploma in the same discipline. A higher level diploma may be part of a higher degree programme. Some students admitted to the higher degree programme may be notionally considered as the students of the diploma programme, upon completion of which they may be permitted to continue for the higher degree. Since the degree/diploma programmes are designed to suit the manpower development needs and are based on student inputs with diverse qualifications/ and/or experiences, the unit requirements of such programmes will be spelt out when the same are introduced if they differ from the existing programmes. The matter will be reported to the Senate. The eligibility for the award of First Level, Senior First Level and Higher Level diplomas will be worked out as per clauses 9.01 and 9.03. Certain contingencies may arise when the academic calendar of a Work Integrated Learning and Collaborative Programme differs from the normal academic calendar of the Institute. Whenever such a contingency arises, the academic calendar of that programme will be worked out by the Dean, WILP in consultation with the clause 1.08 Committee. If such a reworked calendar routinely differs from the normal calendar, it may be termed as labile semester/term, if so required for operational purposes. Under very special circumstances, a student may be permitted to register in on campus as well as off-campus courses during any semester/term. Such registration as well as the necessary credit transfer will be permitted by Clause 1.08 Committee in the case of Integrated First Degree programmes and by the Higher Degree Counselling Committee in the case of Higher Degree programmes, on a case by case basis. Since all off-campus degree programmes are heavily committed and are operated in collaboration and association with named organisations, students admitted to any such programme are also subject to the general discipline and code of conduct applicable to the employees of these organisations. Failure of a student to conform with the same may result in his/her being required to discontinue from his/her programme. Some off-campus degree programmes may have students without any affiliation to a particular organisation and some may have students not affiliated to a collaborating organisation but to certain like-minded organisations. However, for all such students, consent of the collaborating organisations would be necessary. In all off-campus programmes the pedagogy will emphasise self-study and discussions along with traditional methods of instruction. Since the off-campus programmes heavily depend on the facilities and the 10.12 10.13 10.14 10.15 10.16 10.17 10.18 10.19 10.20 10.21 60 environment provided by the collaborating organizations, some unforeseen exigencies may arise necessitating termination of a programme in the midstream. In such exigencies the Institute may take possible steps to salvage the situation, if the concerned students fully cooperate in such measures. The location and pursuit of courses like dissertation, Project Work, Project, Capstone Project, internship, work

experience etc., of the off-campus programmes need not necessarily coincide with the town and organization where other courses for a same programme were conducted due to organisational needs or the nature of special courses. However, wherever such courses are conducted there must be a collaborating organisation to ensure the necessary facilities and environment. Additional transcript, similar to the type of Practice School Transcript giving pedagogy and details of the programmes may also be issued to the students of off campus programmes by the Work Integrated Learning Programmes Division. At the end of every semester/term the following minimum academic standards have to be achieved by the students in the various off-campus, Work Integrated Learning and Collaborative Programmes: (i) The student should not have secured any E grade. (ii) A student should have CGPA of at least 4.50 in the case of integrated first degree/first level diploma and at least 5.50 in the case of higher degree/higher level diploma. (iii) A student should have at least cleared as per his/her latest performance, such courses (counted from the point of his/her entry into the Institute) as are prescribed for a period that corresponds to two-thirds of the number of semesters spent by him/her since his/her entry into the Institute with reference to his/her current programme. This means that at any stage of reckoning the student should not have spent more than 50% extra time than what is prescribed for him/her upto that stage. Students who do not meet one or more of the requirements given in clause 10.24 will come under the purview of Academic Monitoring Board consisting of the following members: Dean, Work Integrated Learning Programmes (Convenor), Associate Dean, Work Integrated Learning Programmes, Dean AUGS, Dean AGSR, Dean Practice School. This Board will function the same way as the Academic Counselling Board and also will have all the authorities of the ACB mentioned in Section 5 of the Academic Regulations. Certain specialized programmes may require situation-specific/person-centered operational rules. This will be approved by the concerned authorities and shall be notified from time to time through Information Brochure(s) of Work Integrated Learning Programmes Division, Institute Bulletin, etc.

**11. Linkages with earlier Regulations** This Academic Regulation incorporates all the changes that have been approved by the Senate after the printing of the previous version of the Academic Regulations. These regulations will apply to the continuing students in all programmes 10.22 10.23 10.24 10.25 10.26 11.01 11.02 61 admitted under earlier regulations in addition to the transitory provisions applicable to them.

**12. Follow-Through Actions** In a system of continuous evaluation where the various components of teaching and evaluation culminate at the end of each semester, it is but natural to view the registration process and all related activities as a continuous operation in search of finding out when a student meets the requirements of graduation. To pursue this task methodically and effectively, use is made of what is known as Eligibility Sheet, which is actually a reproduction of the semester wise pattern for each student with any additional components, if found necessary. Recalling that information on the registration card is tallied against the grade sheet, all information available up to the latest grade sheet is abstracted, entered and updated in the Eligibility Sheet semester after semester. In the performance of this task it would be useful to recall certain nomenclature which have been already defined in these

regulations. Whenever a student has properly registered in a course, the outcome at the end of the semester will be a grade or a report (except for a course registered originally but subsequently substituted by another course at the time of amendment of the original registration). The above outcome is defined as a performance in a course. When the performance is a grade, the student is said to have cleared the course. When this grade does not fulfil the prerequisite requirement of a subsequent course, the grade would be termed 'inadequate' or 'not adequate'. Now, these regulations provide for a student to repeat a course at his/her own option or for a designated authority to require a course to be registered again, even after this course has been cleared earlier with or without adequate grade. Visualizing that the student may make several attempts at the same course throughout his/her existence in the programme, the Eligibility Sheet will continuously record the grades and reports against each course in his/her programme through this multiple performance. Above entries made against a course produce a series of performances. It is, however, only the last performance which will guide action. A simplified procedure is to ignore all Ws and all innocuous RCs and look at the latest performance in the truncated series. If this latest performance in the truncated series is a grade, it becomes the operative grade for the purpose of CGPA, prerequisite, repetition of the course and all other matters of registration where the information about grade in a course is necessary. If the latest performance in the truncated series is a report, the nature of the report will control further action. For the operation of these regulations, the meaning of the word Electives can be understood only in the context in which it is being used. When it is used with reference to a classification of a course by a discipline or a category, it denotes the academic objective of that course in relation to other courses. When this term is used in the context of the structure, it refers to a category of courses which are not named in the Bulletin or by a designated authority. Thus, the elective courses in the context of structure are simply the courses which a student selects from a pool of available courses outside his/her own named courses. This pool, therefore, will contain, among others, courses which are academically definable as Core Course(s) and their 62 extensions known as Discipline Courses other than Compulsory (Discipline Elective). Structurally speaking, the specific discipline character of a programme is bestowed by the categories Core Course(s), which is compulsory and Discipline elective, which is optional. These courses simply cannot be placed in a general cafeteria for non-majors to pick and choose. Before placing these courses in the general pool, their integrity must be preserved by devising suitable protective restrictions around them. By the same token, the theme of flexibilities cannot be allowed to be overstated to such an extent that the academic selectivity, challenge and rigour are to be relaxed in any application of these flexibilities. The meaning and the application of some other expressions in these regulations will be clear only after a point of reckoning before a semester/term has been selected in respect of each student in the semester wise pattern of his/her prescribed programme. This point of reckoning depends on the efflux of time from the date of entry of the student into the Institute and identifies the current semester for the student. Prescribed Semester Courses (PSC) are those courses which appear in the student's current semester;

while higher level courses are courses which appear in his/her subsequent semesters and Backlog (BL) courses appears in his/her previous semesters. The specific meaning and operation attached to the term BL aim to determine how the clearing of backlog can be simultaneously done along with forward movement in a controlled manner. Further, according to this postulate of BL in case like admission with advanced standing, admission with marginal deficiency, transfer, etc., a student may begin with a backlog even at the point of entry to his/her programme. On the other hand, the requirement of prior preparation is stated in terms of what courses a student must have cleared before He/she is allowed to register in certain intended course like PS, TS or a set of courses like Core Courses. The lack of this prior preparation, even by a single course, precludes registration in the above intended courses. The requirement of prerequisite is always described only in terms of a pair of courses where grade obtained in the first must be adequate before a student is permitted to register in the second. Having thus introduced these terms, it would be illuminating to compare and contrast the three expressions: backlog, prior preparation and prerequisite. In spite of the apparent similarity in the concept and purpose behind these three expressions, it should be clear that their definitions are unique, they are not interchangeable terms and their applications are for meeting distinctly different needs. While prior preparation and prerequisite are requirements without which forward movement is prohibited, backlog is an information on a list of courses which measures the burden of the past and perceives what supplementary efforts are needed to move forward. While backlog and prior preparation estimates scan all courses (in different sets) previous to the point of reckoning, prerequisite deals with a pair of courses on a one 63 to-one correspondence. Gradewise, prior preparation requires only the minimum grade, prerequisite requires a specific grade which may be more than the minimum and backlog is concerned with both minimum grades as well as adequate grades. To appreciate and apply these regulations meaningfully, it should be borne in mind that these three expressions have highly specific imports and applications. These are not to be used synonymously or interchangeably. Having described the format of the information base, three distinct parts of the follow-through actions will now be enumerated for a thumb nail reference for all concerned. (a) Registration time 1. Clause 3.09 will inform whether the student can be registered at all in the semester. 2. The correct courses of (BL) and (PSC) in which the student can be registered are to be identified as per clauses 3.25(a), 3.21 & 10.11. 3. 4. 5. 6. 7. 8. 9. (i) The first charge in the registration card shall always be (BL) which reduces to (OBL). If the student remains content in registering in (OBL) or less He/she will not register in any other course in the semester. (ii) If the student wants to proceed beyond (OBL) his/her second charge must be (OPSC) or at least a portion of (OPSC). (iii) If He/she has only (OBL) plus a part of (OPSC), He/she cannot register in any other course in the semester. (iv) If the student registers in (OBL) plus (OPSC) only, then He/she can be permitted to register in higher level/repeat course. (v) Certain conflicts between (OBL) and (OPSC) in the full formulation can be resolved only by Dean, AUGS/AGSR (clauses 3.25 I, II, III & IV). Where a student has no (OBL), his/her first charge is (PSC) and the above formulation will begin with (PSC) rather than (BL). Courses belonging to a prerequisite

chain should be fully scrutinized before registration is permitted. Similarly, conditions of over preparedness, under preparedness and banning of certain courses to specific group of students as specified in the Bulletin (see clauses 3.13, 3.15, 3.18 & Bulletin). Before permitting registration in courses like PS I, PS II, TS, Core Courses for single or dual degree, the required prior preparation enunciated in clause 3.14 must be ensured. In the selection of courses under elective/the conditions imposed in clause 3.15 must be fulfilled. Registration in electives in addition to the required number needs certain vigilance as described in clauses 2.08& 2.09. For courses to be taken only on audit, clause 7.33 to be consulted. 10. It is to be noted that in the integrated first degree programmes and higher degree programmes, there is no scope for taking any other course along with PS or Thesis-Seminar or Internship I or Internship II. (b) Post-registration 64 (Soon after original registration and in the current semester) 1. Task envisaged in clause 1.12 regarding students who are on rolls of the Institute or are off the rolls of the Institute to be completed. 2. Decisions to be taken in regard to cancellation, if necessary, of certain courses (3.20, 3.27(g) & 7.06). 3. All registrations in the current semester to be checked for correctness and for action and wrong registrations to be cancelled (3.27(a)). 4. Implementation of amendments revisions to the original registration to be taken up (3.26 & 3.27). 5. Continuous overall monitoring of instruction and evaluation throughout the semester to be maintained (4.26). 6. Identification of students who are anticipated to graduate at the end of the current semester is to be made. 7. Action after submission of the Ph.D. thesis as per clauses 8.26 & 8.27 to be initiated. (c) Pre-registration (Prior actions before registration in coming semester) 1. Grade sheets where necessary to be withheld. (4.22) 2. Eligibility sheet to be brought up-to-date and latest status in courses with more than one performance to be ascertained after completing the pending provisions for certain reports. (1.16, 4.13 to 4.20) 3. CGPA to be updated. (1.13) 4. The minimum academic requirements are to be fulfilled by each student. Where any student falls below this minimum, his/her case is to be referred to ACB. (5.02 & 5.03) 5. Requirements of graduation to be verified for those students who fulfil the same. (Section 9) 6. Status on use of number of electives to be verified for further action. (2.08& 4.20 (b)) 7. Identification to be made of an inadequate grade in course which is the prerequisite of another course. (1.16) 8. Identification of NC reports and 'unsatisfactory' interim grades to be completed for further action. (4.20, 8.26 & 8.35) 9. Copies of all question papers, hand-outs, and other necessary information to be collected. (4.23) 10. Feedback received from previous semester to be analysed and to be acted upon. (4.26) 11. Preparation to be made for implementing decisions on transfer, dual degree, admission with advanced standing, admission with marginal deficiency, admission in the second semester, conversion of the status of Ph.D. students from provisional to formal. (Section 7, 8.01, 10.04 & 10.10) 12. Semester wise programme details, where not available in the Bulletin, to be worked out. (1.08, 1.08(a) and 2.12) 13. Course offerings, proposed hand-outs and scheduling of examinations are to be arranged. (4.26) 65 14. Courses which are restricted to particular population and also courses which can be offered only after the original registration date, are to be identified (3.27(g)). 15. Timetable to be finalised. 16. Preparation

to be made for determining the correct package of courses for the semester for each student. For students in programmes which have to be worked out on a case by case basis, consult 1.09. For students under purview of ACB, section 5 has to be consulted. 17. Prior determination of whether or not the student has fulfilled the prior preparation requirement for first time registration in Core Courses and as well as registration in PS/TS to be made.

(3.14) 18. For each student, the estimate of the (BL) is to be made as per clauses 3.25 I & 3.25 IV. 19. As soon as information on (OBL) and (OPSC) are available, this task is to be completed as per clause 3.25(d). 20. In regard to registration of students under the purview of ACB, estimates of (BL) and (PSC) or (OBL) and (OPSC) are not to be used for registration purposes but to be used by ACB itself. (5.04 & 10.08) 21. Allotment of students for PS, TS, Dissertation, project courses and Internship in terms of timing, stations and other details to be finalised. 22. Record if any in the coming semester Thesis-Seminar are to be decoupled (6.17) 23. Prepare for any delayed PS I or additional PS I as an elective operation. (6.08) 24. Requested and workable summer courses are to be planned. (Section 7(b)) 25. Identification of Ph.D. Inputs. (8.02) 26. Identification of Ph.D. course-work.(8.03) 27. Decision of Language requirement for Ph.D. students. (8.12 to 8.14) 28. Decision on Teaching Practice/Practice Lecture Series. (8.15 & 2.12) 29. Topic of Research for Ph.D. students. (8.19) 30. Monitoring of academically weak Ph.D. students. (8.38) 31. Discontinuation of Ph.D. students. (8.35) 32. Action to be reported to Senate (8.38,7.03,10.14) and Research Board (8.38). 13. Revision These regulations would be subject to modification and revision by the Senate from time to time. 13.01 Note: The booklet has been corrected/ratified upto the 208th Senate held on September 8, 2022. Any decisions/guidelines passed after the 208th Senate shall be corrected in later editions of the booklet. The regulations mentioned in this booklet is currently not applicable for BITSoM, Mumbai Campus of BITS Pilani.

Oceania Macquarie University, Australia La Trobe University, Australia CRC for Contamination Assessment and Remediation of the Environment (CRC CARE), Australia Curtin University, Australia Royal Melbourne Institute of Technology (RMIT), Melbourne, Australia University of Adelaide, Australia

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23.10.2024 FN 02.01.2025 FN 1781 BITS F211 INTRODUCTION TO IPR 0 0 1 1 SHRIKANTH  
CHARDE 205 T7 28.10.2024 FN 06.01.2025 AN 1632 BITS F225 ENVIRONMENTAL STUDIES 3  
0 3 1 VIJAYA ILANGO 223 M2 T2 Th6 28.10.2024 FN 02.01.2025 AN 2 Vijay Lakshmi Mishra  
220 T2 W5 Th4 1334 BITS F312 NEURAL NET & FUZZY LOGIC 3 0 3 1 V KALAICHELVI 210 T9  
Th9 F5 24.10.2024 FN 10.01.2025 FN 1784 BITS F319 NEGOTIATION SKILLS AND TECHNIQUES  
2 0 2 1 YUSRA QAMAR 183 M3 T4 W6 Th4 25.10.2024 FN 08.01.2025 FN 2336 BITS F327  
ARTIFICIAL INTELLIGENCE FOR ROBOTICS 2 1 3 1 RAM KARTHIKEYAN 219 T3 W9 21.10.2024  
FN 31.12.2024 AN 1 Ram Karthikeyan MS2 W12 1592 BITS F412 PRACTICE SCHOOL II 20 1 R  
GOMATHI BHAVANI 1808 BITS F416 INTRO TO NANO SCIENCE 3 0 3 1 K K SINGH 276 M8 T2  
Th5 22.10.2024 FN 03.01.2025 FN 1593 BITS F421T THESIS 16 1 A SOMASUNDARAM 1616  
BITS F422T THESIS 16 1 A SOMASUNDARAM 1617 BITS F423T THESIS 9 1 A  
SOMASUNDARAM 1811 BITS F441 ROBOTICS 3 0 3 1 RAM KARTHIKEYAN 270 M3 Th1  
22.10.2024 AN 08.01.2025 AN Practical 1 Ram Karthikeyan MS2 Th67 2434 BITS F463  
CRYPTOGRAPHY 3 0 3 1 RAJA M 222 M4 T6 Th6 22.10.2024 AN 08.01.2025 AN 1339 BITS  
F464 MACHINE LEARNING 3 0 3 1 PRANAV M PAWAR 226 M4 T6 Th6 22.10.2024 AN  
08.01.2025 AN 1379 BITS F467 BIOETHICS AND BIOSAFETY 3 0 3 1 SHRIKANTH CHARDE 205  
M4 Th4 F1 22.10.2024 AN 08.01.2025 AN 1797 BITS F468 NEW VENTURE CREATION 3 0 3 1  
VILAS H GAIDHANE (Local I/C) G30 T & Th 6-8 PM (IST) TBA TBA 2167 BITS G661 RESEARCH  
METHODOLOGY I 5 1 S RAMACHANDRAN 1073 CE F211 MECHANICS OF SOLIDS 3 0 3 1 VIVEK  
B KARTHA 219 T4 W3 Th8 F3 21.10.2024 AN 09.01.2025 AN 1075 CE F213 SURVEYING 3 1 4  
1 MEGHANA S CHARDE 219 M3 T9 W5 Th2 25.10.2024 FN 30.12.2024 AN Practical 1

Meghana S Charde MF1 F12 2279 CE F230 CIVIL ENGINEERING MATERIALS 3 2 4 1 DEEPTHI MARY DILIP 219 M1 T5 Th3 F4 24.10.2024 AN 06.01.2025 AN Practical 1 Vivek B Kartha MG2 M45 2280 CE F231 FLUID MECHANICS 3 0 3 1 AKSHAY VENKATESHWARAN 219 M8 T6 W4 Th5 23.10.2024 AN 03.01.2025 FN 1196 CE F312 HYDRAULIC ENGINEERING 3 1 4 1 BRIJ KISHORE PANDEY 276 M1 T3 W8 Th3 23.10.2024 AN 02.01.2025 AN Practical 1 Brij Kishore Pandey MF4 W34 1197 CE F313 FOUNDATION ENGINEERING 3 0 3 1 VIVEK B KARTHA 276 M2 T1 W1 Th6 21.10.2024 AN 30.12.2024 AN 2281 CE F320 DESIGN OF REINFORCED CONCRETE STRUCTURE 3 0 3 1 AKSHAY VENKATESHWARAN 276 M3 T4 W6 F1 24.10.2024 AN 07.01.2025 FN 1667 CE F366 LABORATORY PROJECT 3 1 BRIJ KISHORE PANDEY 1686 CE F376 DESIGN PROJECT 3 1 BRIJ KISHORE PANDEY 1231 CE F417 APP OF AI IN CIVIL ENGG 3 0 3 1 DEEPTHI MARY DILIP 276 M6 W2 Th1 21.10.2024 FN 31.12.2024 AN 1220 CE F431 PRINCI OF GEO INFO SYS 3 0 3 1 BRIJ KISHORE PANDEY 276 M5 Th7 F2 22.10.2024 AN 08.01.2025 AN Practical 1 BRIJ KISHORE PANDEY MF1 T56 1069 CHE F211 CHEMICAL PROCESS CALCULA 3 0 3 1 NISHANT H PANDYA 245 M1 W4 Th2 F3 21.10.2024 AN 30.12.2024 AN 1072 CHE F212 FLUID MECHANICS 3 0 3 1 MAJID HASAN KHAN 220 M3 W2 Th9 F4 23.10.2024 AN 03.01.2025 FN 1071 CHE F213 CHEM ENGG THERMODYNAMICS 3 0 3 1 SOUVIK K PAUL 245 T9 W3 Th3 F1 24.10.2024 AN 06.01.2025 AN 1070 CHE F214 ENGINEERING CHEMISTRY 3 0 3 1 DIPIKA BARBADIKAR 245 M5 T4 W1 Th1 25.10.2024 FN 09.01.2025 AN 1184 CHE F311 KINETICS & REACTOR DESIG 3 0 3 1 B G PRAKASH KUMAR 256 M2 T1 W4 F1 21.10.2024 AN 30.12.2024 AN 1185 CHE F312 CHEMICAL ENGG LAB I 0 3 3 1 SOUVIK K PAUL/ B G Prakash Kumar/ Murchana Changmai 340 T345 1 SOUVIK K PAUL/ B G Prakash Kumar/ Murchana Changmai 340 W789 1186 CHE F313 SEPARATION PROCESSES II 3 0 3 1 MURCHANA CHANGMAI 256 M1 W3 Th3 F2 24.10.2024 AN 07.01.2025 FN 1187 CHE F314 PROCESS DES PRINCIPLES I 3 0 3 1 NISHANT H PANDYA 256 M3 T8 W2 Th4 25.10.2024 FN 09.01.2025 FN 2741 CHE F316 SUST ENERGY SYSTEMS 3 0 3 1 SOUVIK K PAUL 256 M4 Th8 F3 22.10.2024 AN 08.01.2025 AN 1668 CHE F366 LABORATORY PROJECT 3 1 MURCHANA CHANGMAI 1687 CHE F376 DESIGN PROJECT 3 1 MURCHANA CHANGMAI 1204 CHE F413 PROCESS PLANT SAFETY 3 0 3 1 MURCHANA CHANGMAI 256 M6 Th6 F4 21.10.2024 FN 31.12.2024 AN 1006 CHEM F110 CHEMISTRY LABORATORY 0 2 1 VIJAYA ILANGO 1 Rusal Raj 306 M34 2 Vijaya Ilango 306 M89 3 Vijay Lakshmi Mishra 306 T89 4 Dipika Barbadikar 306 W34 5 Vijaya Ilango 306 Th23 6 Dipika Barbadikar 306 T23 7 Rusal Raj 306 Th89 8 Vijay Lakshmi Mishra 306 F34 1007 CHEM F111 GENERAL CHEMISTRY 3 0 3 1 RUSAL RAJ 101 M8 W4 Th6 F1 23.10.2024 FN 02.01.2025 FN 2 Geetha Kannan 105 M2 T6 W3 F1 3 Vijaya Ilango 123 M5 T6 W8 F3 4 Rusal Raj 165 M1 T6 W2 Th3 1008 CS F111 COMPUTER PROGRAMMING 3 1 4 1 TOJO MATHEW 101 M6 T2 W2 Th1 24.10.2024 FN 06.01.2025 FN 2 Sapna Sadhwani 105 M6 T1 W8 F3 3 Shalaka S. Mahadik 123 T4 W2 Th1 F4 4 Shalaka S. Mahadik 165 M6 T8 W5 Th5 5 Shalaka S. Mahadik 183 M1 T5 W9 Th9 Practical 1 Shalaka S. Mahadik 333 M34 2 Sapna Sadhwani 333 T45 3 Ashish Gupta 333 Th89 4 Shalaka S. Mahadik 333 F12 5 Shalaka S. Mahadik 333 T12 1092 CS F213 OBJECT ORIENTED PROG 3 1 4 SAPNA SADHWANI 23.10.2024 AN 03.01.2025 FN 1 Pranav M Pawar 267 M1 T3 W5 Th2 2 Sujala D Shetty 268 M8 T3 W1 Th2 3 Sapna Sadhwani 269 M3 T8 Th2

F1 4 Neena Susan Shaji 257 M8 T3 W1 Th2 Practical 1 Sapna Sadhwani 335 M89 2 Sujala D Shetty 335 W34 3 Neena Susan Shaji 335 W89 4 Neena Susan Shaji 335 Th45 1090 CS F214 LOGIC IN COMPUTER SC 3 0 3 1 ASHISH GUPTA 267 T9 W4 Th1 F2 24.10.2024 AN 06.01.2025 AN 2 S Jeyelatha 268 T2 W2 Th4 F2 3 Ashish Gupta 269 T4 W2 Th4 F4 4 S Jeyelatha 257 M1 W4 Th3 F4 1093 CS F215 DIGITAL DESIGN 3 1 4 1 VILAS H GAIDHANE 267 M2 T8 W1 Th5 21.10.2024 AN 30.12.2024 AN 2 R Swarnalatha 268 M2 W8 Th5 F1 3 Shazia Hasan 269 M2 W4 Th5 F3 4 Ashutosh Misra 257 M2 T4 W9 Th1 5 Ashutosh Misra 228 M5 W6 Th3 F1 Practical 1 Adarsh Venkataraman 304 M34 2 Nilesh Goel 304 M89 3 Vilas H Gaidhane 304 T23 4 Ashutosh Misra 304 T89 5 R Swarnalatha 304 W23 6 Nilesh Goel 304 W89 7 Abdul Razak 304 Th34 8 Ananth Bharadwaj M 304 Th89 9 Nilesh Goel 304 F34 1091 CS F222 DISCR STRUC FOR COMP SCI 3 0 3 1 A SOMASUNDARAM 267 T4 W3 Th6 F5 25.10.2024 FN 09.01.2025 AN 2 Shanookha Ali 268 T4 W9 Th6 F4 3 A Somasundaram 269 M4 T9 W5 F2 4 Shanookha Ali 257 M4 T9 W5 F2 1316 CS F301 PRINCIPLES OF PROGG LANG 2 0 2 B VIJAYAKUMAR 23.10.2024 AN 02.01.2025 AN 1 N M Dhanya 210 W5 F2 2 B Vijayakumar 222 W5 Th4 3 N M Dhanya 226 M7 W7 4 B Vijayakumar 229 W3 F3 2266 CS F320 FOUNDATION OF DATA SCIENCE 3 0 3 1 ASHISH GUPTA 226 M5 T1 W6 21.10.2024 FN 31.12.2024 AN 1317 CS F342 COMPUTER ARCHITECTURE 3 1 4 1 TAMIZHARASAN PERIYASAMY 210 M6 W3 Th4 F1 24.10.2024 AN 07.01.2025 FN 2 Raja M 222 M6 W3 Th8 F4 3 Tamizharasan Periyasamy 226 T4 W5 Th1 F3 4 Raja M 229 T4 W5 Th1 F2 Practical 1 B Vijayakumar 336 T34 2 Angel A Jothi 336 W34 3 Tamizharasan Periyasamy 336 W89 4 Raja M 336 Th34 1314 CS F351 THEORY OF COMPUTATION 3 0 3 1 ELAKKIYA RAJASEKAR 210 M3 W4 Th8 F3 21.10.2024 AN 30.12.2024 AN 2 S Jeyelatha 222 T3 W1 Th1 F1 3 Elakkiya Rajasekar 226 T5 W9 Th4 F1 4 N M Dhanya 229 M6 T5 W9 F1 1670 CS F366 LABORATORY PROJECT 3 1 SUJALA D SHETTY 1740 CS F367 LABORATORY PROJECT 3 1 SUJALA D SHETTY 1315 CS F372 OPERATING SYSTEMS 3 0 3 1 ANGEL A JOTHI 210 T5 W8 Th1 F4 25.10.2024 FN 09.01.2025 FN 2 Tojo Mathew 222 T4 W4 Th3 F2 3 Angel A Jothi 226 M3 T3 Th3 F2 4 Tojo Mathew 229 M3 W7 Th7 F4 1689 CS F376 DESIGN PROJECT 3 1 SUJALA D SHETTY 1756 CS F377 DESIGN PROJECT 3 1 SUJALA D SHETTY 1333 CS F407 ARTIFICIAL INTELLIGENCE 3 0 3 1 SUJALA D SHETTY 210 M4 T6 Th6 22.10.2024 AN 08.01.2025 AN 1322 CS F415 DATA MINING 3 0 3 1 ANGEL A JOTHI 229 M5 T1 W6 21.10.2024 FN 31.12.2024 AN 2440 CS F425 DEEP LEARNING 3 0 3 1 TAMIZHARASAN PERIYASAMY 229 M4 T6 Th6 22.10.2024 AN 08.01.2025 AN 2444 CS F429 NATURAL LANGUAGE PROCESSING 3 0 3 1 ELAKKIYA RAJASEKAR 210 M5 T1 W6 21.10.2024 FN 31.12.2024 AN 1714 CS F491 SPECIAL PROJECT 3 1 SUJALA D SHETTY 1380 ECE F211 ELECTRICAL MACHINES 3 1 4 1 R GOMATHI BHAVANI 228 M2 T8 W9 Th5 23.10.2024 AN 03.01.2025 FN Practical 1 R Gomathi Bhavani 313 T56 1381 ECE F212 ELECTROMAGNETIC THEO 3 0 3 1 ANANTH BHARADWAJ M 228 M1 T9 W4 F5 25.10.2024 FN 09.01.2025 AN 1383 ECE F214 ELECTRONIC DEVICES 3 0 3 1 NILESH GOEL 228 M3 T4 W2 Th1 24.10.2024 AN 06.01.2025 AN 1382 ECE F215 DIGITAL DESIGN 3 1 4 1 VILAS H GAIDHANE 267 M2 T8 W1 Th5 21.10.2024 AN 30.12.2024 AN 2 R Swarnalatha 268 M2 W8 Th5 F1 3 Shazia Hasan 269 M2 W4 Th5 F3 4 Ashutosh Misra 257 M2 T4 W9 Th1 5 Ashutosh Misra 228 M5 W6 Th3 F1 Practical 1 Adarsh Venkataraman 304 M34 2 Nilesh Goel 304 M89 3 Vilas H Gaidhane 304

T23 4 Ashutosh Misra 304 T89 5 R Swarnalatha 304 W23 6 Nilesh Goel 304 W89 7 Abdul Razak 304 Th34 8 Ananth Bharadwaj M 304 Th89 9 Nilesh Goel 304 F34 1701 ECE F266

STUDY PROJECT 3 1 ABDUL RAZAK 1389 ECE F311 COMMUNICATION SYSTEMS 3 1 4 1

JAGADISH NAYAK 271 M5 W2 Th4 F3 21.10.2024 AN 30.12.2024 AN Practical 1 Jagadish Nayak 330 W567 1388 ECE F314 EM FIELDS & MICRO ENGG 3 0 3 1 ABDUL RAZAK 271 T3 W4 Th6 F2 23.10.2024 AN 02.01.2025 AN 1702 ECE F366 LABORATORY PROJECT 3 1 ABDUL RAZAK 1703 ECE F376 DESIGN PROJECT 3 1 ABDUL RAZAK 1706 ECE F377 DESIGN PROJECT 3 1 ABDUL RAZAK 1392 ECE F434 DIGITAL SIGNAL PROCESS 3 1 4 1 SHAZIA HASAN 271 M4 W1 Th7 F1 24.10.2024 AN 07.01.2025 FN Practical 1 Shazia Hasan 303 T456 1393 ECE F472

SATELLITE COMMUNICATION 3 0 3 1 ABDUL RAZAK 271 M3 T1 W9 21.10.2024 FN 31.12.2024 AN 1023 ECON F211 PRINCIPLES OF ECONOMICS 3 0 3 1 SARTAJ RASOOL 257 M5 T6 Th7 22.10.2024 AN 31.12.2024 AN 1120 ECON F212 FUND OF FIN AND ACC 3 0 3 1 ASGAR ALI 220 M6 T1 W7 28.10.2024 AN 07.01.2025 AN 2570 ECOM F213 OBJECT ORIENTED PROG 3 1 4 SAPNA SADHWANI 23.10.2024 AN 03.01.2025 FN 1 Pranav M Pawar 267 M1 T3 W5 Th2 2 Sujala D Shetty 268 M8 T3 W1 Th2 3 Sapna Sadhwani 269 M3 T8 Th2 F1 4 Neena Susan Shaji 257 M8 T3 W1 Th2 Practical 1 Sapna Sadhwani 335 M89 2 Sujala D Shetty 335 W34 3 Neena Susan Shaji 335 W89 4 Neena Susan Shaji 335 Th45 2571 ECOM F214 ELECTRONIC DEVICES 3 0 3 1 NILESH GOEL 228 M3 T4 W2 Th1 24.10.2024 AN 06.01.2025 AN 2572 ECOM F215 DIGITAL DESIGN 3 1 4 1 VILAS H GAIDHANE 267 M2 T8 W1 Th5 21.10.2024 AN 30.12.2024 AN 2 R Swarnalatha 268 M2 W8 Th5 F1 3 Shazia Hasan 269 M2 W4 Th5 F3 4 Ashutosh Misra 257 M2 T4 W9 Th1 5 Ashutosh Misra 228 M5 W6 Th3 F1 Practical 1 Adarsh Venkataraman 304 M34 2 Nilesh Goel 304 M89 3 Vilas H Gaidhane 304 T23 4 Ashutosh Misra 304 T89 5 R Swarnalatha 304 W23 6 Nilesh Goel 304 W89 7 Abdul Razak 304 Th34 8 Ananth Bharadwaj M 304 Th89 9 Nilesh Goel 304 F34 2573 ECOM F222 DISCR STRUC FOR COMP SCI 3 0 3 1 A SOMASUNDARAM 267 T4 W3 Th6 F5 25.10.2024 FN 09.01.2025 AN 2 Shanookha Ali 268 T4 W9 Th6 F4 3 A Somasundaram 269 M4 T9 W5 F2 4 Shanookha Ali 257 M4 T9 W5 F2 1009 EEE F111 ELECTRICAL SCIENCES 3 0 3 1 SUNIL THOMAS 184 M8 T4 W1 Th5 24.10.2024 FN 06.01.2025 FN 2 V Kalaichelvi 185 M3 T2 W4 Th5 3 Adarsh Venkataraman 189 M8 T4 W1 Th5 4 V Kalaichelvi 190 M5 T6 W2 Th2 1077 EEE F211 ELECTRICAL MACHINES 3 1 4 1 R GOMATHI BHAVANI 228 M2 T8 W9 Th5 23.10.2024 AN 03.01.2025 FN Practical 1 R Gomathi Bhavani 313 T56 1078 EEE F212 ELECTROMAGNETIC THEO 3 0 3 1 ANANTH BHARADWAJ M 228 M1 T9 W4 F5 25.10.2024 FN 09.01.2025 AN 1080 EEE F214 ELECTRONIC DEVICES 3 0 3 1 NILESH GOEL 228 M3 T4 W2 Th1 24.10.2024 AN 06.01.2025 AN 1079 EEE F215 DIGITAL DESIGN 3 1 4 1 VILAS H GAIDHANE 267 M2 T8 W1 Th5 21.10.2024 AN 30.12.2024 AN 2 R Swarnalatha 268 M2 W8 Th5 F1 3 Shazia Hasan 269 M2 W4 Th5 F3 4 Ashutosh Misra 257 M2 T4 W9 Th1 5 Ashutosh Misra 228 M5 W6 Th3 F1 Practical 1 Adarsh Venkataraman 304 M34 2 Nilesh Goel 304 M89 3 Vilas H Gaidhane 304 T23 4 Ashutosh Misra 304 T89 5 R Swarnalatha 304 W23 6 Nilesh Goel 304 W89 7 Abdul Razak 304 Th34 8 Ananth Bharadwaj M 304 Th89 9 Nilesh Goel 304 F34 1242 EEE F311 COMMUNICATION SYSTEMS 3 1 4 1 JAGADISH NAYAK 271 M5 W2 Th4 F3 21.10.2024 AN 30.12.2024 AN Practical 1 Jagadish Nayak 330 W567 1244 EEE F312 POWER SYSTEMS 3 0 3 1 SUNIL

THOMAS 270 T6 W3 Th7 F2 23.10.2024 AN 02.01.2025 AN 1243 EEE F313 ANALOG & DIGIT VLSI DES 3 0 3 1 VILAS H GAIDHANE 270 M4 T5 W4 Th8 24.10.2024 AN 07.01.2025 FN 1731 EEE F366 LABORATORY PROJECT 3 1 ABDUL RAZAK 1691 EEE F376 DESIGN PROJECT 3 1 ABDUL RAZAK 1758 EEE F377 DESIGN PROJECT 3 1 ABDUL RAZAK 2288 EEE F411 INTERNET OF THINGS 3 1 4 1 JAGADISH NAYAK 270 T9 Th9 F5 24.10.2024 FN 10.01.2025 FN Practical 1 JAGADISH NAYAK 330 M12 1247 EEE F432 MEDICAL INSTRUMENTATION 3 0 3 1 R SWARNALATHA 271 M6 Th3 F4 22.10.2024 AN 08.01.2025 AN 1249 EEE F472 SATELLITE COMMUNICATION 3 0 3 1 ABDUL RAZAK 271 M3 T1 W9 21.10.2024 FN 31.12.2024 AN 1539 FIN F311 DERIVATIVES & RISK MGMT 3 0 3 1 RAJA SACHIDANANDAM 222 T9 Th9 F5 24.10.2024 FN 10.01.2025 FN 1130 GS F211 MOD POLITICAL CONCEPTS 3 0 3 1 SHAMSHAD KHAN 214 T9 Th9 F5 24.10.2024 FN 10.01.2025 FN 1131 GS F212 ENVIRON DEV & CLIMATE CH 3 0 3 1 GEETHA KANNAN 267 M6 T1 W7 28.10.2024 AN 07.01.2025 AN 1170 GS F232 INTRODUCTORY PSYCHOLOGY 3 0 3 1 SHAIMA AMATULLAH 268 M6 T1 W7 28.10.2024 AN 07.01.2025 AN 1176 GS F332 CONTEMPORARY INDIA 3 0 3 1 MRUTUYANJAYA SAHU 214 M9 T7 Th2 28.10.2024 FN 06.01.2025 AN 2537 HSS F211 INTRODUCTION TO ARABIC 3 0 3 1 SHAMSHAD KHAN 215 M9 T7 Th2 28.10.2024 FN 09.01.2025 AN 1603 HSS F222 LINGUISTICS 3 0 3 1 SAYANTAN CHAKRABORTY 228 M6 T1 W7 28.10.2024 AN 07.01.2025 AN 1775 HSS F232 INTRO TO DEV STUDIES 3 0 3 1 MRUTUYANJAYA SAHU 269 M6 T1 W7 28.10.2024 AN 07.01.2025 AN 1776 HSS F266 STUDY PROJECT 3 1 MRUTUYANJAYA SAHU 1626 HSS F346 INTERNATIONAL RELATIONS 3 0 3 1 SHAMSHAD KHAN 223 M6 T1 W7 28.10.2024 AN 07.01.2025 AN 1828 HSS F349 ECOCRITICISM 3 0 3 1 SAYANTAN CHAKRABORTY 210 M9 T7 Th2 28.10.2024 FN 06.01.2025 AN 1835 HSS F350 HUMAN RIGHTS: HISTORY, THEORY AND PRACTICE 3 0 3 1 MRUTUYANJAYA SAHU 215 T9 Th9 F5 24.10.2024 FN 10.01.2025 FN 2272 HSS F365 SCIENCE OF SUSTAINABLE HAPPINESS 3 0 3 1 SHAZI S J 257 M6 T1 W7-07.01.2025 AN 905 MATH D021 REMEDIAL MATHEMATICS 5 0 5 1 K KUMAR 267 M3 T5 W6 F4 22.10.2024 FN 31.12.2024 FN 1010 MATH F111 MATHEMATICS I 3 0 3 SUHEL AHMAD KHAN 22.10.2024 FN 31.12.2024 FN 1 Suhel Ahmad Khan 101 M3 T5 W6 F4 2 S Baskaran 105 M1 T9 W6 Th3 3 Prasanta K Barik 123 M2 T5 W6 Th3 4 Rashmi Rani 165 M3 T3 W1 Th1 5 Suhel Ahmad Khan 184 M5 T1 W2 Th6 6 K Kumar 185 M5 T1 W2 Th6 7 Prasanta K Barik 189 M5 T1 W2 Th6 8 Rashmi Rani 190 M1 T1 W3 F2 1012 MATH F113 PROBABILITY & STATISTICS 3 0 3 1 MANEESHA 184 M6 T6 W9 Th1 25.10.2024 FN 08.01.2025 FN 2 Shanookha Ali 185 M6 T6 W3 Th1 3 S Baskaran 189 M6 T6 W9 Th1 4 Maneesha 190 M2 T8 W5 Th7 2734 MATH F114 MATH FOR BUSINESS 3 0 3 1 LIJO JOHN 183 M8 W8 Th5 F5 21.10.2024 FN 30.12.2024 FN 1022 MATH F211 MATHEMATICS III 3 0 3 SUHEL AHMAD KHAN 22.10.2024 FN 31.12.2024 FN 1 Prasanta K Barik 223 M9 T8 W9 F5 2 Suhel Ahmad Khan 220 M8 T3 Th8 F2 1122 MATH F212 OPTIMIZATION 3 0 3 1 S BASKARAN 270 M8 T2 Th5 22.10.2024 FN 03.01.2025 FN 1662 MATH F266 STUDY PROJECT 3 1 K K SINGH 1679 MATH F366 LABORATORY PROJECT 3 1 K K SINGH 1747 MATH F367 LABORATORY PROJECT 3 1 K K SINGH 1696 MATH F376 DESIGN PROJECT 3 1 K K SINGH 2273 MATH F432 APPLIED STATISTICAL METHODS 3 0 3 1 MANEESHA 210 M8 T2 Th5 22.10.2024 FN 03.01.2025 FN 2379 ME F112 WORKSHOP PRACTICE 1 1 2 1 VINCENT S KUMAR 184 Th3-10.01.2025 FN 2 Vincent S Kumar 185 W5 3 Vincent S Kumar

189 W8 4 Vincent S Kumar 190 M4 Practical 1 Priyank Upadhyaya MG1 M12 2 Ravindra Bhardwaj MG1 M89 3 Vincent S Kumar MG1 T34 4 Harpreet Singh Bedi MG1 T89 5 Shashank Khurana MG1 W34 6 Ravindra Bhardwaj MG1 W89 7 Harpreet Singh Bedi MG1 Th34 8 Vincent S Kumar MG1 Th89 1083 ME F211 MECHANICS OF SOLIDS 3 0 3 1 PRIYANK UPADHYAYA 220 M9 T8 W9 F3 21.10.2024 AN 30.12.2024 AN 1082 ME F212 FLUID MECHANICS 3 0 3 1 MAJID HASAN KHAN 220 M3 W2 Th9 F4 23.10.2024 AN 03.01.2025 FN 2394 ME F216 MATERIALS SCIENCE & ENGG 2 0 2 1 RAVINDRA BHARDWAJ 220 M2 W4 Th5 24.10.2024 AN 06.01.2025 AN Practical 1 Ravindra Bhardwaj MF3 T56 2396 ME F217 APPLIED THERMODYNAMICS 3 1 4 1 SHASHANK KHURANA 220 T4 W6 Th3 F5 25.10.2024 FN 09.01.2025 AN Practical 1 Shashank Khurana MF4 M45 2401 ME F314 DESIGN OF MACHINE ELEMENTS 3 0 3 1 VINCENT S KUMAR 221 M1 T8 W3 F1 21.10.2024 AN 30.12.2024 AN 2403 ME F315 ADVANCED MANUFACTURING PROCESSES 2 1 3 1 HARPREET SINGH BEDI 221 M6 T4 W4 23.10.2024 AN 02.01.2025 AN Practical 1 Harpreet Singh Bedi MG1 F234 2404 ME F316 MANUFACTURING MANAGEMENT 2 0 2 1 RAM KARTHIKEYAN 221 T5 W5 Th3 24.10.2024 AN 07.01.2025 FN 2405 ME F317 ENGINES, MOTORS AND MOBILITY 2 0 2 1 SHASHANK KHURANA 221 M2 T1 W8 25.10.2024 FN 09.01.2025 FN 1680 ME F366 LABORATORY PROJECT 3 1 VINCENT S KUMAR 1697 ME F376 DESIGN PROJECT 3 1 VINCENT S KUMAR 1286 ME F452 COMPOSITE MATERIAL & DES 3 0 3 1 HARPREET SINGH BEDI 221 M3 W6 Th1 22.10.2024 AN 08.01.2025 AN 1290 ME F491 SPECIAL PROJECT 3 1 VINCENT S KUMAR 1024 MGTS F211 PRINCIPLES OF MANAGEMENT 3 0 3 1 AQILA BEGUM 267 M5 T6 Th7 22.10.2024 AN 31.12.2024 AN 2 Anurag Singh 268 M5 T6 Th7 3 Yusra Qamar 269 M5 T6 Th7 1014 PHY F110 PHYSICS LABORATORY 0 2 1 SWATI ROUTH 1 Krishnakanta Bhattacharya 309 M34 2 Shishir Kumar Pandey 309 M89 3 Krishnakanta Bhattacharya 309 T34 4 K K Singh 309 T89 5 Swati Routh 309 W34 6 Shishir Kumar Pandey 309 W89 7 Shishir Kumar Pandey 309 Th34 8 Krishnakanta Bhattacharya 309 Th89 9 Swati Routh 309 F34 1015 PHY F111 MECH OSCILLATIONS & WAVE 3 0 3 K K SINGH 21.10.2024 FN 30.12.2024 FN 1 Swati Routh 184 M2 T3 W6 F1 2 K K Singh 185 M2 W6 Th2 F1 3 Shishir Kumar Pandey 189 M4 T5 W6 F1 4 Krishnakanta Bhattacharya 190 M6 W6 Th5 F1 1493 PHY F215 INTRO TO ASTRO & ASTROPH 3 0 3 1 SWATI ROUTH 222 M9 T7 Th2 28.10.2024 FN 06.01.2025 AN 1666 PHY F266 STUDY PROJECT 3 1 K K SINGH COM COD COURSE NO COURSE TITLE L P U SEC INSTRUCTOR -IN-CHARGE / Instructor ROOM DAYS/ HOURS MID SEM COMPRE DATE 2003 BITS G540 RESEARCH PRACTICE 4 1 S RAMACHANDRAN Su123 575 BITS G561T DISSERTATION 16 1 S RAMACHANDRAN 756 BITS G629T DISSERTATION 16 1 S RAMACHANDRAN 402 EEE G553 UTILITY APP OF POWER ELE 3 0 3 1 R GOMATHI BHAVANI 267 W123 23.10.2024 31.12.2024 2144 EEE G593 POWER QUALITY 0 0 5 1 ANANTH BHARADWAJ M 267 F123 25.10.2024 03.01.2025 1254 EEE F422 MODERN CONTROL SYSTEM 3 0 3 1 ADARSH VENKATARAMAN 303 Su456 27.10.2024 06.01.2025 92 EEE G546 SYSTEM SIMULATION LAB 0 0 4 1 SUNIL THOMAS 267 M123 21.10.2024 30.12.2024 678 DE G611 DYNAMICS AND VIBRATION 3 2 5 1 PRIYANK UPADHYAYA 269 F123 25.10.2024 30.12.2024 410 ME G515 COMPUT FLUID DYNAMICS 0 0 5 1 VENKATA REDDY POLURU 269 W123 23.10.2024 31.12.2024 266 ME G611 COMP AIDED ANAL & DESIGN 2 3 5 1 RAVINDRA BHARDWAJ 269 Su456 27.10.2024

06.01.2025 445 DE G513 TRIBOLOGY 0 0 5 1 UDAYAKUMAR 269 M123 21.10.2024

03.01.2025 2453 MPBA G501 MANAGERIAL ECONOMICS 3 0 3 1 SARTAJ RASOOL 277 M234

21.10.2024 30.12.2024 2454 MPBA G502 FINANCIAL STAT ANALY & REPORT 3\* 1 ASGAR ALI 277 W234 23.10.2024 06.01.2025 2455 MPBA G503 MARKETING MANAGEMENT 3 0 3 1 AQILA BEGUM 277 Th234 24.10.2024 02.01.2025 2456 MPBA G504 MANAGING PEOPLE & ORGANIZATION 3 0 3 1 ANURAG SINGH 277 F345 25.10.2024 09.01.2025 2458 MPBA G506 DATA MANAGEMENT AND WAREHOUSING 3\* 1 AARIZ FAIZAN JAVED 277 M1 T12 22.10.2024 31.12.2024 2461 MPBA G509 CORPORATE FINANCE 3\* 1 ASGAR ALI 277 Th1 F12 25.10.2024 03.01.2025 2462 MPBA G510 OPERATIONS & SUPPLY CHAIN MGMT 3\* 1 LIJO JOHN 277 T34 W1 22.10.2024 07.01.2025 BITS PILANI, DUBAI CAMPUS DUBAI INTERNATIONAL ACADEMIC CITY, DUBAI HD PROGRAMMES III. COURSEWISE TIMETABLE FIRST SEMESTER 2024-25 2464 MPBA G512 TIME SERIES ANALYSIS AND FORECASTING 3\* 1 RAJA SACHIDANANDAM 276 Th123 24.10.2024 02.01.2025 2466 MPBA G514 DEEP LEARNING FOR BUSINESS 3\* 1 AARIZ FAIZAN JAVED 276 T34 W1 22.10.2024 07.01.2025 2467 MPBA G515 PRESCRIPT ANALY WITH MATH PROG 3\* 1 LIJO JOHN G30 M234 21.10.2024 30.12.2024 2468 MPBA G516 ADV SPREAD & MAC PROG FOR BUSI 3\* 1 RAJA SACHIDANANDAM 276 M1 T12 22.10.2024 31.12.2024 2481 MPBA G529 MARKETING RESEARCH & METRICS 3\* 1 AARIZ FAIZAN JAVED G30 W234 23.10.2024 06.01.2025 2486 MPBA G534 PEOPLE ANALYTICS 3\* 1 YUSRA QAMAR G30 F123 25.10.2024 03.01.2025 2202 MBA G501 MANAGERIAL ECONOMICS 3 0 3 1 SARTAJ RASOOL 257 W234 23.10.2024 06.01.2025 2257 MBA G535 CROSS CULTURAL MANAGEMENT 3 0 3 1 ANURAG SINGH 257 M234 21.10.2024 30.12.2024 2348 MBA G543 LEADING MODERN ORGANIZATIONS 3 0 3 1 SHAZI S J 257 F123 25.10.2024 03.01.2025 2349 MBA G544 ORGANIZATIONAL THEORY & BEHAVIOUR 3 0 3 1 ANURAG SINGH 257 Th234 24.10.2024 02.01.2025 2350 MBA G545 MANAGEMENT SCIENCE 3 0 3 1 LIJO JOHN 257 M1 T12 22.10.2024 31.12.2024 2352 MBA G547 ACCOUNTING FOR MANAGERS 3 0 3 1 ASGAR ALI 257 W1 F45 25.10.2024 09.01.2025 2364 MBA G567 TECHNOLOGY INNOVATION & ENTREPRENEURSHIP 3 0 3 1 AQILA BEGUM 257 T34 Th1 22.10.2024 07.01.2025 1333 CS F407 ARTIFICIAL INTELLIGENCE 1 SUJALA D SHETTY 268 F123 25.10.2024 31.12.2024 507 CS G513 NETWORK SECURITY 3 1 4 1 PRANAV M PAWAR 268 M123 21.10.2024 30.12.2024 Practical 1 Pranav M Pawar W12 333 SS G653 SOFTWARE ARCHITECTURES 3 2 5 1 B VIJAYAKUMAR 268 Su456 27.10.2024 03.01.2025 Practical 1 B Vijayakumar Su89 Note (ME Courses): \* The day and hour are indicated as DH pair. For example W34 indicates Wednesday 3rd and 4th periods \*\* Timings for Classes: MONDAY,WEDNESDAY, FRIDAY: Period 1=7. 00PM -7.45 PM, Period 2=7.45 PM -8.30 PM, Period 3=8.45 PM -9.30 PM, Period 4= 9.30 PM-10.15 PM \*\*\* Timings for Classes: SUNDAY: Period 1=9.00 AM -9.45 AM, Period 2=9.45 AM -10.30 AM, Period 3=10.45 AM - 11.30 AM, Period 4= 11.30 AM -12.15 PM, Period 5= 12.15 PM -1.00 PM, Period 6=2.00 PM -2.45 PM, Period 7= 2.45 PM -3.30 PM, Period 8= 3.45 PM -4.30 PM, Period 9= 4.30 PM -5.15 PM Note (MBA/MPBA): \* The day and hour are indicated as DH pair. For example W34 indicates Wednesday 3rd and 4th periods \*\* Timings for Classes: MONDAY, TUESDAY,WEDNESDAY, THURSDAY: Period 1=7. 00PM -7.45 PM, Period 2=7.45 PM -8.30 PM, Period 3=8.45 PM -9.30 PM, Period 4= 9.30 PM-10.15 PM

\*\*\* Timings for FRIDAY: Period 1=6.30 PM -7.15 PM, Period 2=7.15 PM - 8.00 PM, Period 3=8.15 PM -9.00 PM, Period 4= 9.00 PM-9.45 PM, Period 5= 9.45 PM-10.30 PM

Idea's, Innovations and Startups looking for support with pre incubation and incubation, funding, connect with investors, 1-o-1 mentoring from industry/sector experts, tech credits and co working space, technology transfer and commercialization should contact: S. No  
Contact Person Designation 1. Campus Prof. Arya Kumar Convener, BITS ISP, Executive Member - PIEPS Professor, Department of Economics and Finance 2. Prof. Satyendra Kumar Sharma Pilani Co-Convener BITS ISP, Joint Secretary- PIEPS, Faculty-in-Charge: CIIE, Associate Professor, Department of Management 3. Mr. Sachin Arya Secretary BITS ISP, CEO, PIEPS Pilani 4. Pilani Prof. Mridula Goel In-charge & Project Investigator BITS BIRAC BioNEST, Professor, Department of Economics Goa 5. Dr. Rajorshi Sen Gupta Faculty-in-Charge: CIIE, Assistant Professor, Department of Economics 6. Dr. Harish V. Dixit Goa Faculty-in-Charge: CIIE, Assistant Professor, Department of Electrical and Electronics Engineering. 7. Dr. Aakash Ashok Kamble Hyderabad Faculty-in-Charge: CIIE, Assistant Professor, Department of Humanities 8. Mr. Rajneesh Kumar Technology Transfer Officer [Institute Wide] Dubai Pilani 9. Dr. Satya Dash CEO, BITS BioCyTIH Foundation Goa Contents Preamble

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The BITS Innovation and Startup Policy for Students and Faculty will enable the institution to actively engage the stakeholders in strengthening an innovation and entrepreneurship ecosystem through a guiding framework. This framework will help in maintaining uniformity of various policies and processes across campuses of BITS Pilani. This will also guide in setting resource plans to achieve entrepreneurship goals of the institute	

and give momentum to start ups and other ventures founded and co-founded by BITSians in India and across the globe. Message from the Vice Chancellor One of the key pillars in the growth narrative of BITS Pilani for the last five decades has been innovation across multiple functions of the University – curriculum and pedagogy, research, and industry engagement. The educational system encourages students to unleash their talent and potential, so as to carve out their own journey to excel in different walks of life. Similarly, faculty members keep coming out with innovative approaches to the teaching-learning process. They also choose societal problems to undertake their research pursuits. Thirdly, they join hands with their students to promote enterprise creation. The teaching-learning system coupled with the entrepreneurship ecosystem being strengthened through new courses, programmes, various innovation/incubation platforms of the institute (e.g. CIIE, CEL, the TBIs etc.) that has led to more than 8%-10% of the BITSians founding enterprises – sooner or later. BITS Pilani has been contributing substantially in the start-up canvas of the country with at least a dozen BITSian unicorns presently. Policies of the institute encourage to build a culture of innovation that results in entrepreneurial leadership amongst students and faculty. The institute encourages and inspires various stakeholders to come out with disruptive and incremental technology driven solutions to pain points. We love to experiment and innovate to come out with the next big Start-up. We believe in building and cultivating an innovation culture that promotes constructive destruction by coming out with solutions to customer problems toward enhancing their overall experience with the product/service. We would keep strengthening our overall ecosystem to nurture the culture for promotion of innovation and start-ups.

1.1. Vision Innovations from BITS Pilani would be a key contributor in solving problems facing the humanity, create wealth, and help build a sustainable world.

2. Key Goals

BITS Innovation & Startup Policy envisions an integrated, across-the-campuses innovation & entrepreneurship ecosystem to facilitate, nurture, and propel ideas and innovations of students, faculty, and staff and provide an overall framework to govern, empower, and harness capabilities to build solutions for the societal problems.

2.1 Provide Comprehensive infrastructure (labs, incubation space etc.) for innovation and entrepreneurship on the campus for students and faculty

2.2 Develop innovation focused courses and programs to inspire entrepreneurial spirit in students

2.3 Build a framework of favorable, “entrepreneur first” policies and procedures for empowering student, faculty, and staff entrepreneurs

2.4 Ensure resources – technical, financial, physical, and others for catalyzing innovation on the campuses.

2.5 Install internal capabilities and capacity to support ideas and enterprises to take them from lab to market, to scale and sustain a robust innovation culture.

2.6 Empower all Campuses to formulate and implement strategic plans for ensuring the implementation of BITS Startup & Innovation Policy

2.7 Incentivize, appreciate, and recognize innovations at all levels.

3. Governance Framework

An Innovation Advisory Committee shall oversee the implementation of the BITS Startup & Innovation Policy. The committee shall consist of the following stakeholders:

- Chair: Vice Chancellor, BITS Pilani
- Co-Chair: Campus Directors of Pilani, Goa, Hyderabad, and Dubai
- Convener: NISP Coordinator
- 2 Members from Academia
- 2 Members from Startup

**Ecosystem** • Chief Financial Officer, BITS Pilani • 2 Members from BITS Pilani and its allied societies The committee shall meet bi-annually to discuss progress and recommend measures for a successful implementation of the policy. The term of the members on the committee shall be for 2 years, to be extended by the Chair.

**4. Policy Period** The initial policy shall be in-force for a period of 3 years.

**5. Policy Framework** The BITS Innovation & Startup Policy shall operate within the following key pillars for achieving the goals as mentioned in the policy.

**5.1 Academics:** Design, develop and offer programs, courses, labs, workshops etc. for nurturing entrepreneurial interest amongst students, faculty, and staff.

**5.2 Infrastructure:** Make available integrated incubation and innovation infrastructure consisting of maker spaces, design and innovation labs, co-working space, ICT infrastructure, conference rooms, and other amenities to facilitate conversion of ideas into prototypes-MVP-product and service driven enterprises.

**5.3 Resources:** Provide requisite funds and budgets for undertaking initiatives and activities, hiring manpower, infrastructure development and maintenance, seed funds to support innovation and entrepreneurship.

**3 5.4 Programs:** Design, development and delivery of programs to strengthen pre incubation, incubation, and acceleration of enterprises, consisting of knowledge sessions, workshops, mentoring support, learning materials, industry & investor connect, and other networking opportunities.

**5.5 Events:** Undertake planning, designing, financing and execution of events targeted towards spurring interest amongst budding entrepreneurs, support existing entrepreneurs, and develop a pipeline of innovative ideas. Students, faculty, and staff would be encouraged and supported to organize events such as business plan competition, hackathons, workshops, immersion programs, internships, talks, summits etc.

**5.6 Supporting Policies:** To complete the objectives of this policy, various divisions of BITS Pilani should formulate favorable policies to encourage startup creation. Some of these policies are: Faculty Entrepreneurship Policy, Faculty Mentoring Policy, Technology Commercialization policy, Incubation policy, Deferred placement policy, Sabbatical policy, Startups and Doctoral Thesis policy etc.

**5.7 Collaboration and Outreach:** For improvement of systems, processes, programs, and outcomes of the innovation and entrepreneurship, BITS shall collaborate with national and international organizations and institutions of repute, known for active and vibrant entrepreneurship ecosystem.

**5.8 Research based Entrepreneurship:** Promote entrepreneurship based on solving societal problems, deep-tech innovations, patent based, lab-driven research by Faculty and graduate students, with due incentivization in performance management and appraisal. Research leading to innovative, patent based, novel products driven Startups, may be considered equivalent to doctoral thesis for a Ph.D. degree.

**5.9 Impact:** Develop Systems and processes to monitor and measure quantitative and qualitative impact of all entrepreneurship activities as defined in this policy. Such reports shall be placed before the innovation advisory committee on a periodical basis.

**5.10 Alumni Engagement:** BITS alumni would be the key stakeholders in implementation of the policy with involvement in various programs, events, activities, funding for infrastructure and seed, research collaborations and further investments.

**4 6. Implementation of the Policy**

BITS shall develop a comprehensive, integrated, campus-wide strategic plans for

implementation of the above policy framework to achieve its stated goals. The following stakeholders shall develop these plans:

- Campus Directors
- Centre for Incubation, Innovation, and Entrepreneurship
- Technology Business Incubators
- Alumni and Industry Experts

Implementation plan and process shall be led by a senior official / authority of the institute. Such an official shall report to the Vice-Chancellor.

7. Financial Resources Resource mobilization plan will be worked out at the institute for supporting pre incubation, incubation infrastructure and facilities. A sustainable financial strategy would be put in place to reduce the organization constraints.

7.1 ~1% fund of the total annual budget of the institution will be allocated for supporting innovation and startup related activities through creation of separate 'Innovation Fund'.

7.2. The funding shall also include raising funds from diverse sources through government (State and Central) such as DST, DBT, MHRD, AICTE, TDB, TIFAC, DSIR, CSIR, BIRAC, NSTEDB, NRDC, Startup India, Invest India, MeITY, MSDE, MSME, etc.

7.3 Institute shall also approach private and corporate sector to generate funds, under Corporate Social Responsibility (CSR).

7.4 Institute may also raise funding through sponsorships and donations. Institute must actively engage alumni network for promoting innovation and entrepreneurship.

7.5 For expediting the decision making, hierarchical barriers would be minimized and individual autonomy and ownership of initiatives would be given to Incubator Heads and Faculty-in-Charges for the Center for Innovation, Incubation, and Entrepreneurship (CIIE).

5.8. Norms for Faculty Startups

A faculty member desirous of setting up a start-up may submit a business plan or idea at any of the Technology Business Incubators (TBI) at any of the BITS campuses only and will be governed by faculty entrepreneurship policy. The concerned faculty member must inform the respective campus director and the Dean, Sponsored Research and Consultancy Division (SRCD) about the startup as well. The faculty member must disclose the details pertaining to founders, legal entity, IPR, share-holding pattern, any funding received etc. Overall, Involvement of the faculty in a start-up company can be in the following ways:

8.1 Capital Investment by faculty members by way of shares in a start-up with no involvement:

- 8.1.1 A faculty may be involved in start-up by providing capital investment only in return for shares with no other managerial, technical or mentorship role whatsoever.
- 8.1.2 When a faculty member makes a financial investment in a company or a start-up without contributing in technical/ consulting or advisory role or any other involvement of BITS or without contributing intellectual or commercial transaction of BITS, then it shall be considered as a private matter of the concerned faculty and is of no concern to BITS. That it is further clarified that the concerned parties to the transaction shall keep BITS indemnified and BITS will be in no manner responsible for the actions of the concerned Legal Entity, its members, management, shareholders, etc.
- 8.1.3 Further, TBIs of BITS and SRCD will have no role to play in such business association of the faculty member.
- 8.1.4 However, the faculty member will have to make a declaration to BITS, regarding this financial investment as a good practice to avoid any conflict of interest.
- 8.1.5 In case this start-up or any other company intends of award a consultancy project to the BITS faculty, then the same will be done after informing Dean SRCD in writing. The terms of the said approval (amended from time to time, at the sole

discretion of the SRCD) and prevailing rules and regulations (As amended from time to time) for consultancy projects in SRCD, shall apply.

6.8.2 Part time engagement of faculty members in the start-up

8.2.1 Any faculty member may engage in the activities of start-up by taking executive roles such as Director, CEO (Chief Executive Officer), COO (Chief Operating Officer), CTO (Chief Technology Officer) on a part-time engagement under the consultancy norms of the institute. However, there shall be no compensation for this activity. This work shall be over and above all regular duties assigned to the faculty member. That the faculty member should take prior approval in writing from the respective campus director before accepting any part time engagement. The terms of the written approval (As amended from time to time) will be applicable on the faculty member. Under no circumstance the performance of the faculty member, qua all the regular duties assigned, deteriorate.

8.2.2 In case the faculty member is not the founding member of the start-up, then after taking the prior written approval of the respective campus director, the faculty member must inform the Technology Business Incubator where the startup has been incubated.

8.2.3 The mode of this engagement would be an agreement of the faculty member with the start-up besides the BITS technology/ IPR being licensed to the start-up. The terms (including financial) of BITS technology/ IPR to be licensed, will be solely decided by BITS. A faculty member in this arrangement can be permitted to obtain shares of this company in part or full in lieu of cash payment.

8.2.4 It should be critically noted that faculty member at BITS shall ensure that all his/her academic duties and institutional responsibilities take absolute precedence over all other activities related to the start-up regardless of his/her engagement with the company. That it is further clarified that if the performance of the faculty member deteriorates, then the respective campus director has the sole discretion, to withdraw the permission granted.

8.3 Full time engagement of faculty members in the start-up with availing of sabbatical and EoL (Extra-ordinary leave)/Earned Leave (EL) for setting up a start-up/pursuing entrepreneurship

8.3.1 The faculty member may avail of either sabbatical or EoL/ EL for a maximum period of one year as per the prevailing rules of Faculty Affairs Division (FAD) and may be allowed 7 to work full time for the start-up. Permission will be initially given for a period of six months and may be extended for another six months there from.

8.3.2 The faculty member will prior seek approval of BITS for the above-mentioned sabbatical or EoL/EL as the case may be in accordance with the prevailing FAD Rules and Regulations. Permission for sabbatical or EoL/EL would be decided by the respective campus director or it may be referred to a committee involving CIIE faculty-in-charge. The decision of the Director or the appointed committee appointed by the director will be final.

8.3.3 The faculty member must apply for approval for engagement with the start-up and the startup must enter into an agreement with the TBIs. Such an agreement should establish the mode of engagement of the faculty member with the start-up besides including the BITS technology / Intellectual Property being licensed to the start-up. The terms (including financial) of BITS technology/ IPR to be licensed, will be solely decided by SRCD.

8.3.4 The rules for salary to the faculty member during the sabbatical leave, EoL or EL shall be governed by the prevailing Rules and Regulations of FAD.

8.3.5 During the period of EoL, the faculty member can

receive a compensation from the start-up in cash which BITS will be informed about, within 1 week of receipt of the amount. However, in the case where the faculty member is on a sabbatical leave and receives compensation then BITS norms for consultancy projects will be applicable. 8.3.6 However, when on EoL, if the compensation received from the start-up is related to any work done in BITS (including but not limited to usage of facilities at/of BITS) then BITS norms for consultancy projects will be applicable and he/she will be required to share a certain percentage as per the then prevailing norms. This will also apply to those on sabbatical leave. 8.3.7 Faculty member on EoL will be allowed to obtain shares of the start-up/company as compensation for engagement with the company in part or in full, in lieu of cash payment. He/she will however be required to share the details of these shares with BITS. 8.3.8 Faculty member on sabbatical leave too will be allowed to obtain shares of the startup/company as compensation for engagement with the company in part or in full, in lieu of cash payment. He/she will however be required to share the details of these shares with BITS. 8.3.9 The faculty member after completing his sabbatical or EoL will re-join BITS. Post this, no compensation is due to BITS as long as the involvement of the member, for which the compensation was paid, completely ceases after the leave period. 8.3.10 In case the faculty member is involved as a mentor, consultant or any other form other than a shareholder after sabbatical or EoL, then rules applicable will be same as that of part-time engagement as mentioned in section 8.2. 8.3.11 In case a faculty member intends to be involved as a mentor, consultant or any other form after sabbatical or EoL, with the start-up, then the faculty member shall inform the respective campus TBIs. 8.3.12 The terms (including financial) of BITS technology/ IPR to be and/or licensed, will be independent of the above-mentioned Clauses and will survive even after the faculty member re-joins BITS after completing his sabbatical or EoL.

9. Norms for Student Startups

BITS Students can incorporate a start-up company either singly or jointly with faculty as mentors or partners. Innovative ideas would also be evaluated and those exhibiting promise could be provided initially a pre-incubation support and subsequently help them in incorporation, incubation, and seed funding at respective campus TBIs. Students (First Degree, Higher Degree, or Ph.D.)

9.1 Ideally students who intend to put up their start-up based on the technology co developed/ developed by them or the technology owned by the institute, would be allowed to take a license on the said technology on easy term, either in terms of equity in the venture and/ or license fees and/ or royalty to obviate the early-stage financial burden.

9.2 Student Entrepreneurs may earn course credits for working on innovative prototypes/Business Models.

9.3 Students shall not be allowed to skip any of the examinations fixed by BITS while pursuing entrepreneurship in part-time mode. However, in case wherein student intends to take a year off to pursue entrepreneurship on full time basis, his application would be routed through the Dean AUGSD / AGSRD for approval to the Competent Authority.

9.4 Students who win prizes at state / national level idea competitions / business plan competitions may also be given up to 2% grace marks in the semester in which prize was won. This academic incentive shall inculcate the spirit of entrepreneurship among students.

9.5 Student inventors would be allowed to opt for start-up in place of their

mini project/ major project, seminars, summer trainings. The area in which student wants to initiate a start-up may be interdisciplinary or multidisciplinary. However, prior approval of such arrangement has to be approved by a committee comprising of Dean AUGSD / AGSRD and Head of the Department. 9.6 Students who are under incubation, but are pursuing some entrepreneurial ventures while studying are allowed to use their address in the institute to register their company with due permission from the institution. 9.7 The institute has provision of accommodation to the entrepreneurs of incubated start ups with the TBIs within the campus for some period of time, on subsidized cost basis. 10. Norms for Non-Teaching Staff to Invest in Startups 10.1 Capital Investment by Non-Teaching Staff by way of shares in a start-up with no involvement: 10.1.1 A non-teaching staff may be involved in start-up by providing capital investment only in return for shares with no other managerial, technical or mentorship role whatsoever. 10.1.2 When a Non-Teaching Staff makes a financial investment in a company or a start up without contributing in technical/ consulting or advisory role or any other involvement of BITS or without contributing intellectual or commercial transaction of BITS, then it shall be considered as a private matter of the concerned Non-Teaching Staff and is of no concern to BITS. That it is further clarified that the concerned parties to the transaction 10 shall keep BITS indemnified and BITS will be in no manner responsible for the actions of the concerned Legal Entity, its members, management, share-holders, etc. 10.1.3 Further, TBIs of BITS and SRCD will have no role to play in such business association of the Non-Teaching Staff. 10.1.4 However, the Non-Teaching Staff will have to make a declaration to BITS, regarding this financial investment as a good practice to avoid any conflict of interest. 10.1.5 The TBI staff may be allowed to invest in start-ups after taking approval from the respective campus director, and fulfill all the conditions laid in Clause 10.1. 11. Guidelines Regarding Intellectual Property (IP) Rights The intellectual property comprises of Patents, Trademarks, Copyrights, Industrial Designs and Integrated Circuits; Plant Varieties, etc. The following clauses governs the IP rights of start-ups incubated by Students or Faculty at the respective TBIs, and patents, copyrights, trademarks etc. generated after incubation of their start-ups. 11.1 All IP/research results obtained by its full-time/part-time faculty, staff, students, third party manufacturers, vendors or consultants, and any other members thereof during their employment/engagement with the Institute shall only be owned by Institute 11. BITS faculty driven startups which are based on the IP created from their research work and that is owned by BITS under work for hire, may put up a request to license the technology from BITS TT office. The same may be given on easy terms either in terms of equity in the venture and/ or license fees and/ or royalty or a mix of various modes as decided by TT Committee 11.3 The commercial agreements related to license will as per the IP & Commercialization policy applicable at that point of time and will be initiated through Technology Transfer Office of BITS Pilani 11.4 if product/ IP is developed by innovators by not using any institute facilities/ resources, outside office hours (for staff and faculty) and which does not form the part of their research, then product/ IP will be entirely owned by inventors in proportion to the contributions made by them. In this case, inventors can decide to license the technology to

third parties or use the technology the way they deem fit. Such cases should be declared to BITS competent authority with proper justification on IP generation / sources of resources used/ownership to avoid any conflict of interest. 11.5 If a Faculty driven start creates a new IP product using BITS Pilani's background IP from the research conducted at BITS Pilani, the under such cases such startup should license the background IP of BITS Pilani through a license agreement. 11.6 If the Faculty in his individual capacity, develops an IP in any of the BITS supported incubator with financial support from any of the Startup fund from GoI or any external agency using BITS official time, then in such cases IP shall be owned by BITS and Faculty. The same IP shall be licensed to the Faculty startup as and when it will be registered on mutually agreed easy terms 11.7 In case a start-up incubated at respective campus TBIs develops a technology/product, then the IPR would be held by the innovators and the start-up. 11.8 All trademarks, designs etc. shall be the property of the inventors and start-ups incubated at BITS. 11.9 That it is clarified that the above-stated clauses will be subject to the approval of BITS and TBI and the decision of BITS will be final and binding on all of the parties.

**12. Guidelines for Conflict Resolution and Arbitrations**

12.1 If there is a dispute in ownership of IPR or matters related to IPR, a committee, comprising of two faculty members (having developed sufficient IPR and translated to commercialization), two of the Institute's alumni/industry experts (having experience in technology commercialization) and one legal advisor with experience in IPR matters, will examine the issue after meeting the concerned parties to help them settle the same amicably. The Institute can appoint alumni/faculty members of other institutes as members, if sufficiently experienced Institute alumni/faculty members are not available. Where the Parties have used their best efforts but failed to resolve a dispute through negotiation, within 30 days, then the parties may refer the dispute to be finally resolved by arbitration in terms of Clause 10.3 to 10.4. 12.2 This policy document and all procedures outlined by the institute based on this Start up Policy document shall be governed by and construed in accordance with the Laws of India, without giving effect to its choice of laws rules and shall be submitted to the exclusive jurisdiction of the Courts at Pilani and the Hon'ble High Court of Rajasthan. 12.3 If any dispute arises between the Parties hereto during the subsistence of this Policy document or thereafter, in connection with the validity, interpretation, implementation or alleged breach of any provision of this Policy, the Parties hereto shall endeavour to settle such dispute amicably (within 30 days) through mutual discussion among the Parties in dispute. 12.4 In the event the Parties are unable to resolve the dispute through mutual discussions shall be resolved by binding arbitration conducted by a sole arbitrator appointed under the provisions of the Indian Arbitration and Conciliation Act, 1996 (As amended till date) and the rules made thereunder. 12.5 No arbitrator chosen shall be related to, employed by or otherwise affiliated with any Party, or any of their relatives or affiliates. 12.6 The arbitration proceedings shall be conducted in English, and in Pilani. The decision and award of the arbitrator shall be in writing and in English, and final and binding on all the Parties to this Agreement. 12.7 The arbitrator in his or her final arbitral award shall determine the final allocation of the costs of arbitration. 12.8 The award shall be binding on the Parties subject

to the Applicable Laws in force and the award shall be enforceable in court of law in Pilani

13. Pedagogy and Learning Interventions for Entrepreneurship Development 13.1 Diversified approach will be adopted to produce desirable learning outcomes, which should include cross disciplinary learning using mentors, labs, case studies, games, etc. in place of traditional lecture-based delivery. Student clubs/ bodies/ departments organize competitions, boot camps, workshops, conferences, etc. Experts and related bodies shall be involved in institutional strategy planning to ensure enhancement of the student's entrepreneurial thinking and response ability. 13.2 CIIE will start annual 'Innovation & Entrepreneurship award' to recognize 13 outstanding ideas, successful enterprises and contributors for promoting innovation and enterprises ecosystem within the institute. For creating awareness among the students, the teaching methods shall include case studies on business failure and real-life experience reports by startups. TBIs will start documenting case studies on success stores and failures also to create learning repository. Validated learning outcomes will be made available to the students and staff. 13.3 BITS startup eco system is designed for tolerating and encouraging failure. Failures are elaborately discussed and debated to imbibe that failure is a part of life, thus helping in reducing the social stigma associated with it. Very importantly, this is a part of institute's philosophy and culture. Innovation champions will be nominated from within the students/ faculty/ staff for each department/ stream of study. 13.4 Entrepreneurship education is imparted to students at curricular/ co-curricular/ extracurricular level through elective/ short term or long-term courses on innovation, entrepreneurship and venture development. Integration of expertise of the external stakeholders has been done in the entrepreneurship education to evolve a culture of collaboration and engagement with external environment. Alumni are involved extensively in teaching innovation and other courses in the institute. 13.5 In the beginning of every academic session, institute will conduct induction program about the importance of I&E so that freshly inducted students are made aware about the entrepreneurial agenda of the institute and available support systems. Curriculum for the entrepreneurship education is continuously updated based on entrepreneurship research outcomes. 13.6 Institute believes that everyone can become an entrepreneur. Pedagogical changes are done on continuous basis to ensure that maximum number of student projects and innovations are based around real life challenges. Learning interventions developed are used for inculcating entrepreneurial culture. Institute will introduce courses on innovation and Entrepreneurship based on stakeholder's feedback.

A N D / O R A N D / OR A N D / OR Course ID Subject Catalog Title Preq1 code preq1 subject  
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F111 GENERAL BIOLOGY 001112 BIO F211 BIO F211 BIOLOGICAL CHEMISTRY 001002 BIO  
F111 GENERAL BIOLOGY PRE 001114 BIO F212 BIO F212 MICROBIOLOGY 001002 BIO F111  
GENERAL BIOLOGY PRE 001113 BIO F213 BIO F213 CELL BIOLOGY 001002 BIO F111 GENERAL  
BIOLOGY PRE 001115 BIO F214 BIO F214 INTEGRATED BIOLOGY 001002 BIO F111 GENERAL  
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PRE 001424 BIO F241 BIO F241 ECOLOGY & ENVIRON SCI 001430 BIO F242 BIO F242 INTRO  
TO BIOINFORMATICS 001002 BIO F111 GENERAL BIOLOGY PRE 001425 BIO F243 BIO F243  
GENETICS 001002 BIO F111 GENERAL BIOLOGY PRE 001426 BIO F244 BIO F244 INSTRU  
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F312 PLANT PHYSIOLOGY 001112 BIO F211 BIOLOGICAL CHEMISTRY PRE AND 001002 BIO  
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BIO F341 BIO F341 DEVELOPMENTAL BIOLOGY 001425 BIO F243 GENETICS PRE AND  
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F212 MICROBIOLOGY PRE AND 001113 BIO F213 CELL BIOLOGY PRE 001439 BIO F352 BIO  
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001434 BIO F418 BIO F418 GENETIC ENGINEERING TECH 001435 BIO F419 BIO F419  
MOLECULAR EVOLUTION 001002 BIO F111 GENERAL BIOLOGY PRE 001441 BIO F431 BIO  
F431 REPRODUCTIVE PHYSIOLOGY 001429 BIO F313 ANIMAL PHYSIOLOGY PRE 001437 BIO  
F441 BIO F441 BIOCHEMICAL ENGINEERING 001438 BIO F451 BIO F451 BIOPROCESS  
TECHNOLOGY 00111 BIO G515 BIO G515 STEM CELL AND GENERATIBE BIOLOGY BIO F341  
DEVELOPMENTAL BIOLOGY CO 00192 BIO G526 BIO G526 CANCER BIOLOGY BIO F243  
GENETICS PRE COURSE PREREQ1 PREREQ2 PREREQ3 PREREQ4 Course ID Subject Catalog  
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PARASITOLOGY AND VECTOR BIOLOGY BIO F342 IMMUNOBIOLOGY PRE 002168 BIO G561  
BIO G561 ADVANCES IN RECOMBINANT DNA TECH BIO F311 RECOMBINANT DNA TECH BIO  
G561 BIO G561 ADVANCES IN RECOMBINANT DNA TECHNOLOGY BIO F311 RECOMBINANT  
DNA TECHNOLOGY PRE BIO G570 BIO G570 RECENT DEVELOPMENTS IN BIOLOGY 002016  
BIO G612 BIO G612 HUMAN GENETICS BIO F243 GENETICS PRE AND BIO F311 RECOMBINA  
NT DNA TECH CO REQ BIO G612 BIO G612 HUMAN GENETICS BIO F243 GENETICS PRE AND  
BIO F311 RECOMBINA NT DNA TECHNOLOGY CO REQ 001100 BIOT F211 BIOT F211  
BIOLOGICAL CHEMISTRY 001002 BIO F111 GENERAL BIOLOGY PRE 001101 BIOT F212 BIOT  
F212 MICROBIOLOGY 001002 BIO F111 GENERAL BIOLOGY PRE 001102 BIOT F213 BIOT F213  
CELL BIOLOGY 001104 BIOT F215 BIOT F215 BIOPHYSICS 001002 BIO F111 GENERAL  
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BIOT F244 INSTRU METHODS OF ANAL 001001 BIO F110 BIOLOGICAL LABORATORY PRE  
001360 BIOT F245 BIOT F245 INTRO TO ENVIRON BIOTECH BIO F111 GENERAL BIOLOGY PRE  
AN D BIOT F212 MICROBIOL OGY PRE 001362 BIOT F311 BIOT F311 RECOMBINANT DNA  
TECH BIOT F211 BIOLOGICAL CHEMISTRY PRE AN D BIOT F243 GENETICS PRE 001363 BIOT  
F314 BIOT F314 INDUS MICROBIO & BIOPRO ENGG BIO F111 GENERAL BIOLOGY PRE AN D  
BIOT F212 MICROBIOL OGY PRE 001364 BIOT F342 BIOT F342 IMMUNOLOGY BIOT F212  
MICROBIOLOGY PRE AN D BIOT F213 CELL BIOLOGY PRE 001365 BIOT F343 BIOT F343  
EXPERIMENTS IN BIOTECH BIOT F241 GENETIC ENGINEERING TECH PRE AN D 001366 BIOT  
F344 BIOT F344 DOWNSTREAM PROCESSING BIO F111 GENEARL BIOLOGY PRE AN D BIOT  
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BIO OF CELL 001374 BIOT F416 BIOT F416 INTRO TO PHARMA BIOTECH 001369 BIOT F417  
BIOT F417 BIOMOLECULAR MODELING BIOT F211 BIOLOGICAL CHEMISTRY PRE 001376 BIOT  
F420 BIOT F420 INTRO TO PLANT BIOTECH 001377 BIOT F422 BIOT F422 NANOBIOTECHN  
OLOGY BIO F111 GENERAL BIOLOGY PRE 001378 BIOT F423 BIOT F423 DRUG DESIGN AND  
DELIVERY CHEM F111 GENERAL CHEMISTRY PRE 001375 BIOT F424 BIOT F424 FOOD  
BIOTECHNOLOG Y BIOT F212 MICROBIOLOGY PRE 001003 BITS F110 BITS F110  
ENGINEERING GRAPHICS 001004 BITS F111 BITS F111 THERMODYNAMI CS 001005 BITS  
F112 BITS F112 TECH REPORT WRITING BITS F113 BITS F113 GENERAL MATHEMATICS-I BITS  
F114 BITS F114 GENERAL MATHEMATICS II BITS F214 BITS F214 SCIENCE, TECHNOLOGY AND  
MODERNITY BITS F218 BITS F218 GENERAL MATHEMATICS III BITS F219 BITS F219 PROCESS  
ENGINEERING 001591 BITS F221 BITS F221 PRACTICE SCHOOL I 001146 BITS F223 BITS F223  
OBJECT ORIENTED PROG 001332 BITS F311 BITS F311 IMAGE PROCESSING 001334 BITS F312  
BITS F312 NEURAL NET & FUZZY LOGIC BITS F312 BITS F312 NEURAL NETWORKS AND FUZZY  
LOGIC 001237 BITS F313 BITS F313 MULTICRI DE MAK IN E & M 001511 BITS F316 BITS F316  
NONLINEAR DYNA & CHAOS 001010 MATH F111 MATHEMATICS I PRE AN D 001011 MATH  
F112 MATHEMATI CS-II PRE AN D 001022 MATH F211 MATHEMATI CS III PRE BITS F317 BITS  
F317 THEORETICAL NEUROSCIENCE PHY F111 MECHANICS OSCILLATIONS AND WAVES PRE  
AN D BIO F111 GENERAL BIOLOGY PRE AN D MATH F211 MATHEMATI CS III PRE AN D MATH  
F113 PROBABILIT Y AND STATISTICS Course ID Subject Catalog Title Preq1 code preq1 subject  
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F342 HUMANITIES & DESIGN 001335 BITS F343 BITS F343 FUZZY LOGIC & APPL 001336 BITS  
F364 BITS F364 HUMAN COMP INTERACTION 001512 BITS F385 BITS F385 INTRO TO

GENDER STUDIES 001337 BITS F386 BITS F386 QUANTUM INFO & COMPUTING BITS F399 BITS F399 HUMANISTIC THEORIES OF SCIENCE AND TECHNOLOGY 001592 BITS F412 BITS F412 PRACTICE SCHOOL II 001248 BITS F415 BITS F415 INTRODUCTION TO MEMS BITS F418 BITS F418 INTRODUCTION TO BIOMEDICAL ENGINEERING 001593 BITS F421 BITS F421 THESIS BITS F430 BITS F430 RENEWABLE ENERGY LABORATORY 002001 BITS F437 BITS F437 TECHNICAL COMMUNICATION 001338 BITS F463 BITS F463 CRYPTOGRAPHY 001339 BITS F464 BITS F464 MACHINE LEARNING 001379 BITS F467 BITS F467 BIOETHICS & BIOSAFETY 001073 CE F211 CE F211 MECHANICS OF SOLIDS 001074 CE F212 CE F212 TRANSPORT PHENOMENA 001075 CE F213 CE F213 SURVEYING 001076 CE F214 CE F214 CONSTRUCTION MATERIALS 001191 CE F241 CE F241 ANALYSIS OF STRUCTURES 001073 CE F211 MECHANICS OF SOLIDS PRE 001192 CE F242 CE F242 CONSTRUCTION PLAN & TECH 001193 CE F243 CE F243 SOIL MECHANICS 001194 CE F244 CE F244 HIGHWAY ENGINEERING 001195 CE F311 CE F311 DES OF CONCRETE STRUCT 001073 CE F211 MECHANICS OF SOLIDS PRE 001196 CE F312 CE F312 HYDRAULIC ENGINEERING 001074 CE F212 TRANSPORT PHENOMENA PRE 001197 CE F313 CE F313 FOUNDATION ENGINEERING 001193 CE F243 SOIL MECHANICS PRE Course ID Subject Catalog Title Preq1 code preq1 subject preq1 catalog pereq1 title Co /Pre Preq2 code preq2 sub preq2 cat pereq2 title Co /Pre Preq3 code preq3 no preq3 cat pereq3 title Co /Pre Preq4 code preq4 no preq4 cat pereq4 title Co /Pre 001215 CE F323 CE F323 INTRO TO ENVIRN ENGG 001217 CE F324 CE F324 NUMERICAL ANALYSIS 001198 CE F341 CE F341 HYDRO & WATER RES ENGG 001074 CE F212 TRANSPORT PHENOMENA PRE 001199 CE F342 CE F342 WATER & WASTEWATER TREAT 001200 CE F343 CE F343 DES OF STEEL STRUCTURES 001073 CE F211 MECHANICS OF SOLIDS PRE CE F345 CE F345 COMPUTATIONA L GEOMECHANICS CE F211 MECHANICS OF SOLIDS PRE CE F243 SOIL MECHANICS PRE CE F313 FOUNDATIO N ENGINEERI NG 001214 CE F411 CE F411 OPER RESEARCH FOR ENGIN 001012 MATH F113 PROBABILITY & STATISTICS PRE 001229 CE F412 CE F412 DISASTER MANAGEMENT 001216 CE F413 CE F413 ADV STRUCTURAL DESIGN 001195 CE F311 DES OF CONCRETE STRUCT PRE AN D 001200 CE F343 DES OF STEEL STRUCTURE S CO 001223 CE F415 CE F415 DES OF PREST CONC STRUCT 001195 CE F311 DES OF CONCRETE STRUCT CO 001230 CE F416 CE F416 COMP APPL IN CIVIL ENGG 001231 CE F417 CE F417 APP OF AI IN CIVIL ENGG 001232 CE F419 CE F419 GEOTECH EQ ENG & MC FOUN 001193 CE F243 SOIL MECHANICS PRE 001233 CE F420 CE F420 INTRO TO BRIDGE ENGG 001195 CE F311 DES OF CONCRETE STRUCT CO AN D 001200 CE F343 DES OF STEEL STRUCTURE S PRE 001235 CE F421 CE F421 A & D OF FRP REIN CON ST 001073 CE F311 DES OF CONCRETE STRUCT CO CE F422 CE F422 URBAN HYDROLOGY 001236 CE F423 CE F423 GREEN BUILD & ENER CONSE 001218 CE F425 CE F425 AIRPORT RAIL & WATERWAYS 001221 CE F426 CE F426 GEOSYN & REIN SOIL STR 001193 CE F243 SOIL MECHANICS PRE 001222 CE F427 CE F427 SYSTEM MODELING & ANAL 001225 CE F429 CE F429 DES OF FOUNDATION SYSTEM 001193 CE F243 SOIL MECHANICS PRE 001226 CE F430 CE F430 DES OF ADV CONC STRUCT 001195 CE F311 DES OF CONCRETE STRUCT PRE Course ID Subject Catalog Title Preq1 code preq1 subject preq1 catalog pereq1 title Co /Pre Preq2 code preq2 sub preq2 cat pereq2 title Co /Pre Preq3 code preq3 no preq3 cat pereq3 title Co /Pre Preq4 code preq4 no preq4 cat pereq4

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F433 REMOTE SENS & IMAGE PROC 001220 CE F434 CE F434 ENV IMPACT ASSESSMENT  
001234 CE F435 INTRODUCTION TO FEM 001191 CE F241 ANALYSIS OF STRUCTURES  
PRE CE G544 CE G544 FRACTURE MECHANICS OF CONCRETE STRUCTURES CE G562 CE G562  
ADVANCED CONCRETE TECHNOLOGY CE F214 CONSTRUCTION MATERIALS PRE 001069 CHE  
F211 CHE F211 CHEMICAL PROCESS CALCULA 001072 CHE F212 CHE F212 FLUID MECHANICS  
001071 CHE F213 CHE F213 CHEM ENGG THERMODYNAMI CS 001004 BITS F111  
THERMODYNAM ICS PRE 001070 CHE F214 CHE F214 ENGINEERING CHEMISTRY 001007  
CHEM F111 GENERAL CHEMISTRY PRE 001180 CHE F241 CHE F241 HEAT TRANSFER 001181  
CHE F242 CHE F242 NUM METHOD FOR CHEM ENGG 001022 MATH F211 MATHEMATICS III  
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CHE F313 CHE F313 SEPARATION PROCESSES II 001183 CHE F244 SEPARATION PROCESSES I  
001187 CHE F314 CHE F314 PROCESS DES PRINCIPLES I 001189 CHE F342 CHE F342 PROCESS  
DYN & CONTROL 001190 CHE F343 CHE F343 PROCESS DES PRINCIPLE II 001187 CHE F314  
PROCESS DES PRINCIPLES I PRE AN D 001186 CHE F313 SEPARATION PROCESSES II PRE  
001206 CHE F411 CHE F411 ENVIR POLLUTION CONTROL 001183 CHE F244 SEPARATION  
PROCESSES I PRE 001207 CHE F412 CHE F412 PROCESS EQUIPMENT DESIGN 001188 CHE  
F341 CHEMICAL ENGG LAB II CO 001204 CHE F413 CHE F413 PROCESS PLANT SAFETY  
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cat pereq4 title Co /Pre 001201 CHE F414 CHE F414 TRANSPORT PHENOMENA 001072 CHE  
F212 FLUID MECHANICS PRE AN D 001180 CHE F241 HEAT TRANSFER PRE AN D 001183 CHE  
F244 SEPARATIO N PROCESSES I PRE 001210 CHE F415 CHE F415 MOLEC & STAT  
THERMODYN 001071 CHE F213 CHEM ENGG THERMODYNAM ICS PRE 001211 CHE F416 CHE  
F416 PROCESS PLANT DES PRO I 001185 CHE F312 CHEMICAL ENGG LAB I PRE 001212 CHE  
F417 CHE F417 PROCESS PLANT DES PRO II 001188 CHE F341 CHEMICAL ENGG LAB II PRE  
001213 CHE F418 CHE F418 MODEL & SIMU IN CHE ENGG CHE F242 NUMERICAL METHODS  
FOR CHEMICAL ENGINEERS PRE AN D CHE F311 KINETICS AND REACTOR DESIGN PRE 001203  
CHE F419 CHE F419 CHEMICAL PROCESS TECH 001188 CHE F341 CHEMICAL ENGG LAB II CO  
001205 CHE F421 CHE F421 BIOCHEMICAL ENGINEERING 001184 CHE F311 KINETICS &  
REACTOR DESIG CO CHE F422 CHE F422 PETROLEUM REFINING TECHNOLOGY CHE F244  
SEPARATION PROCESSES I PRE 001202 CHE F433 CHE F433 CORROSION ENGINEERING CHE  
F243 MATERIAL SCIENCE & ENGINEERING PRE OR ME F213 MATERIAL SCIENCE AND  
ENGINEERIN G PRE OR MF F213 MATERIAL SCIENCE AND ENGINEERI NG PRE 001208 CHE  
F471 CHE F471 ADVANCE PROCESS CONTROL 001189 CHE F342 PROCESS DYN & CONTROL  
PRE 001209 CHE F491 CHE F491 SPECIAL PROJECTS PRE CHE G511 CHE G511 Fluidization  
Engineering CHE F311 Kinetics & Reactor Design PRE CHE G512 CHE G512 Petroleum  
Refining and Petrochemicals CHE F312 Chemical Engineering Lab – I PRE CHE G513 CHE

G513 Environmental Management Systems CHE G522 CHE G522 Polymer Technology CHE F311 Kinetics & Reactor Design PRE CHE G523 CHE G523 Mathematical Methods in Chemical Engineering CHE F312 Chemical Engineering Lab – I PRE CHE G524 CHE G524 Introduction to Multiphase flow CHE F414 Transport Phenomena PRE CHE G526 CHE G526 Nuclear Engineering CHE F312 Chemical Engineering Lab – I PRE CHE G527 CHE G527 Energy Conservation and Management Course ID Subject Catalog Title Preq1 code preq1 subject preq1 catalog pereq1 title Co /Pre Preq2 code preq2 sub preq2 cat pereq2 title Co /Pre Preq3 code preq3 no preq3 cat pereq3 title Co /Pre Preq4 code preq4 no preq4 cat pereq4 title Co /Pre CHE G528 CHE G528 Introduction to Nanoscience & Technology CHE F243 Material Science & Engineering PRE CHE G529 CHE G529 Paper and Pulp Technology CHE F314 Process Design Principles I PRE CHE G532 CHE G532 Alternate Energy Resources CHE G533 CHE G533 Petroleum Product Characterization CHE F312 Chemical Engineering Lab – I PRE CHE G551 CHE G551 Advanced Separation Technology CHE F313 Separation Processes II PRE CHE G552 CHE G552 ADVANCED TRANSPORT PHENOMENA CHE G553 CHE G553 STATISTICAL THERMODYNAMICS CHE G554 CHE G554 COMPUTATIONAL FLUID DYNAMICS CHE G556 CHE G556 ELECTROCHEMICAL ENGINEERING CHE G557 CHE G557 ENERGY SYSTEMS ENGINEERING CHE G558 CHE G558 CHEMICAL PROCESS OPTIMIZATION CHE G559 CHE G559 REACTOR PHYSICS AND ENGINEERING CHE G560 CHE G560 NUCLEAR FUEL CYCLE AND WASTE MANAGEMENT CHE G561 CHE G561 NUCLEAR REACTOR CONTROL AND INSTRUMENTATION CHE G562 CHE G562 THERMAL HYDRAULICS AND HEAT TRANSFER CHE G563 CHE G563 NUCLEAR CHEMICAL ENGINEERING CHE G564 CHE G564 NUCLEAR MATERIALS AND RADIATION DAMAGE CHE G565 CHE G565 RADIATION AND RADIO ISOTOPES APPLICATIONS Course ID Subject Catalog Title Preq1 code preq1 subject preq1 catalog pereq1 title Co /Pre Preq2 code preq2 sub preq2 cat pereq2 title Co /Pre Preq3 code preq3 no preq3 cat pereq3 title Co /Pre Preq4 code preq4 no preq4 cat pereq4 title Co /Pre CHE G566 CHE G566 NUCLEAR SAFETY, SECURITY AND SAFEGUARDS CHE G567 CHE G567 NATURAL GAS PROCESSING CHE G568 CHE G568 MODELING AND SIMULATION IN PETROLEUM REFINING CHE G569 CHE G569 PETROLEUM PRODUCTION ECONOMICS CHE G613 CHE G613 Advanced Mass Transfer CHE F244 Separation Processes I PRE CHE G614 CHE G614 Advanced Heat Transfer CHE F312 Chemical Engineering Lab – I PRE CHE G616 CHE G616 Petroleum Reservoir Engineering CHE G617 CHE G617 Petroleum Refinery Engineering CHE F341 Chemical Engineering Lab – II PRE CHE G618 CHE G618 Petroleum Downstream Processing CHE F314 Process Design Principles I PRE CHE G619 CHE G619 Process Intensification CHE F343 Process Design Principles II PRE CHE G620 CHE G620 Energy Integration Analysis CHE F343 Process Design Principles II PRE CHE G622 CHE G622 Advanced Chemical Engineering Thermodynamics CHE F213 Chemical Engineering Thermodynamics PRE CHE G641 CHE G641 Reaction Engineering CHE F311 Kinetics & Reactor Design PRE 001006 CHEM F110 CHEM F110 CHEMISTRY LABORATORY 001007 CHEM F111 CHEM F111 GENERAL CHEMISTRY 001116 CHEM F211 CHEM F211 PHYSICAL CHEMISTRY I 001117 CHEM F212 CHEM F212 ORGANIC CHEMISTRY I 001118 CHEM F213 CHEM F213 PHYSICAL CHEMISTRY II 001119 CHEM F214 CHEM F214 INORGANIC CHEMISTRY

I 001569 CHEM F223 CHEM F223 COLLOID & SURFACE CHEM 001554 CHEM F241 CHEM F241 INORGANIC CHEMISTRY II 001555 CHEM F242 CHEM F242 CHEMICAL EXPERIMENTATION I Course ID Subject Catalog Title Preq1 code preq1 subject preq1 catalog pereq1 title Co /Pre Preq2 code preq2 sub preq2 cat pereq2 title Co /Pre Preq3 code preq3 no preq3 cat pereq3 title Co /Pre Preq4 code preq4 no preq4 cat pereq4 title Co /Pre 001556 CHEM F243 CHEM F243 ORGANIC CHEMISTRY II 001557 CHEM F244 CHEM F244 PHYSICAL CHEMISTRY III 001118 CHEM F213 PHYSICAL CHEMISTRY II PRE 001559 CHEM F311 CHEM F311 ORGANIC CHEMISTRY III 001117 CHEM F212 ORGANIC CHEMISTRY I PRE/C O 001560 CHEM F312 CHEM F312 PHYSICAL CHEMISTRY IV 001558 CHEM F313 CHEM F313 INSTRU METHODS OF ANAL 001570 CHEM F323 CHEM F323 BIOPHYSICAL CHEMISTRY 001571 CHEM F324 CHEM F324 NUMERICAL METHOD IN CHEM 001572 CHEM F325 CHEM F325 POLYMER CHEMISTRY 001575 CHEM F326 CHEM F326 SOLID STATE CHEMISTRY 001577 CHEM F327 CHEM F327 ELECTROCHEM FUNDA & APPL 001579 CHEM F328 CHEM F328 SUPRAMOLECULAR CHEMISTRY 001580 CHEM F329 CHEM F329 ANALYTICAL CHEMISTRY 001582 CHEM F330 CHEM F330 PHOTOPHYSICAL CHEMISTRY 001118 CHEM F213 PHYSICAL CHEMISTRY II PRE 001583 CHEM F333 CHEM F333 CHEMISTRY OF MATERIALS 001584 CHEM F334 CHEM F334 MAGNETIC RESONANCE 001118 CHEM F213 PHYSICAL CHEMISTRY II PRE AND 001127 PHY F212 ELECTROMAGNETIC THEO I PRE 001585 CHEM F335 CHEM F335 ORGANIC CHEM & DRUG DES 001562 CHEM F311 ORGANIC CHEMISTRY III PRE/C O 001586 CHEM F336 CHEM F336 NANOCHEMISTRY 001587 CHEM F337 CHEM F337 GREEN CHEM & CATALYSIS 001561 CHEM F341 CHEM F341 CHEMICAL EXPERIMENTATION II 001562 CHEM F342 CHEM F342 ORGANIC CHEMISTRY IV 001563 CHEM F343 CHEM F343 INORGANIC CHEMISTRY III 001573 CHEM F412 CHEM F412 PHOTOCHEM & LASER SPECTR 001118 CHEM F213 PHYSICAL CHEMISTRY II PRE 001576 CHEM F413 CHEM F413 E COREL IN ATOM & MOLEC 001557 CHEM F244 PHYSICAL CHEMISTRY III PRE 001578 CHEM F414 CHEM F414 BIO & CHEMICAL SENSORS 001581 CHEM F415 CHEM F415 FRONTIERS IN ORGANIC SYN 001559 CHEM F311 ORGANIC CHEMISTRY III PRE/C O 001574 CHEM F422 CHEM F422 STATISTICAL THERMODYNAM 001116 CHEM F211 PHYSICAL CHEMISTRY I PRE Course ID Subject Catalog Title Preq1 code preq1 subject preq1 catalog pereq1 title Co /Pre Preq2 code preq2 sub preq2 cat pereq2 title Co /Pre Preq3 code preq3 no preq3 cat pereq3 title Co /Pre Preq4 code preq4 no preq4 cat pereq4 title Co /Pre 001008 CS F111 CS F111 COMPUTER PROGRAMMING 001094 CS F211 CS F211 DATA STRUCTURES & ALGO 001091 CS F222 DISCR STRUC FOR COMP SCI PRE OR 001123 MATH F213 DISCRETE MATHEMATICS PRE 001095 CS F212 CS F212 DATABASE SYSTEMS 001092 CS F213 CS F213 OBJECT ORIENTED PROG 001008 CS F111 COMPUTER PROGRAMMING PRE 001090 CS F214 CS F214 LOGIC IN COMPUTER SC 001093 CS F215 CS F215 DIGITAL DESIGN 001091 CS F222 CS F222 DISCR STRUC FOR COMP SCI 001313 CS F241 CS F241 MICROPROC & INTERFACING 001316 CS F301 CS F301 PRINCIPLES OF PROG LANG 001094 CS F211 DATA STRUCTURES & ALGO PRE 001320 CS F303 CS F303 COMPUTER NETWORKS 001315 CS F372 OPERATING SYSTEMS PRE 001321 CS F314 CS F314 SOFT DEV FOR PORT DEVICE 001317 CS F342 CS F342 COMPUTER ARCHITECTURE 001313 CS F241 MICROPROC & INTERFACING PRE AND 001093 CS F215

DIGITAL DESIGN PRE 001314 CS F351 CS F351 THEORY OF COMPUTATION 001091 CS F222  
DISCR STRUC FOR COMP SCI PRE AN D 001090 CS F214 LOGIC IN COMPUTER SC PRE 001318  
CS F363 CS F363 COMPILER CONSTRUCTION 001314 CS F351 THEORY OF COMPUTATION PRE  
AN D 001316 CS F301 PRINCIPLES OF PROGG LANG PRE 001319 CS F364 CS F364 DESIGN &  
ANAL OF ALGO 001094 CS F211 DATA STRUCTURES & ALGO PRE 001315 CS F372 CS F372  
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CS F407 ARTIFICIAL INTELLIGENCE 001328 CS F413 CS F413 INTERNETWORK ING  
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ECE F215 DIGITAL DESIGN 001384 ECE F241 ECE F241 MICROPROC & INTERFACING 001385  
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COMMUNICATIO N SYSTEMS ECE F243 SIGNALS & SYSTEMS PRE ECE F312 ECE F312 EM  
FIELDS AND MICROWAVE ENGINEERING LABORATORY EEE F212 ELECTROMAGNE TIC  
THEORY CO/PREOR ECE F212 ELECTROMA GNETIC THEORY CO/PREOR INSTR F212  
ELECTROMA GNETIC THEORY CO/PRE 001388 ECE F314 ECE F314 EM FIELDS & MICRO ENGG  
001391 ECE F341 ECE F341 ANALOG ELECTRONICS ECE F244 MICROELECTRO NIC CIRCUITS  
PRE 001390 ECE F344 ECE F344 INFO THEORY & CODING EEE F243 SIGNALS & SYSTEM PRE  
001395 ECE F414 ECE F414 TELECOM SWIT SYS & NETWK 001396 ECE F416 ECE F416  
DIGITAL COMMUNICATIO N 001397 ECE F418 ECE F418 MOD COMMUNICATIO N TECH ECE  
F243 SIGNALS & SYSTEMS PRE 001394 ECE F431 ECE F431 MOBILE TELECOM NETWORKS ECE  
F243 SIGNALS & SYSTEMS PRE 001392 ECE F434 ECE F434 DIGITAL SIGNAL PROCESS ECE  
F243 SIGNALS & SYSTEMS PRE 001393 ECE F472 ECE F472 SATELLITE COMMUNICATIO N ECE  
F243 SIGNALS & SYSTEMS PRE 001023 ECON F211 ECON F211 PRINCIPLES OF ECONOMICS  
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