

## PhD Course Catalogue

### PhD in Educational Leadership

Course Code	Courses	Credit
EDUC 600	Educational Dimensions	3
EDUC 611	Academic Writing and Research	3
EDUC 620	Research Methods	3
EDUC 621 OR EDLE 621	Advanced Qualitative Research Methods or Theories and Practice in Educational Leadership	3
EDUC 622	Advanced Quantitative Research Methods	3
EDUC 632	Organizational Theory and Behavior	3
EDUC 640	Mixed Methods Research	3
EDUC 642	Human Resource Management and Development in Education	3
EDUC 644	Statistical Methods in Education and Social Science Research	3
EDUC 650	Transformative Education Research and Practice	3
EDUC 652	Policy and Governance for Educational Leadership	3
EDUC 660	Transformative Education Research and Practice	3

### PhD in Development Studies

Course Code	Courses	Credit
EDUC 611	Academic Writing and Research	3
DEVP 611	Sociology of Education and Development	3
EDUC 620	Research Methods	3
DEVP 621	Development Policy and Planning	3
EDUC 621	Advanced Qualitative Research Methods	3
EDUC 622	Advanced Quantitative Research Methods	3
DEVP 631	Development Theory and Practice	3
EDUC 640	Mixed Methods Research	3
EDUC 644	Statistical Methods in Education and Social Science Research	3
EDUC 650	Transformative Education Research and Practice	3
EDUC 660	Participatory Action Research	3

## PhD in English Language Education

Course Code	Courses	Credit
EDUC 600	Educational Dimensions	3
EDEL 609	Language Teacher Education and Development	3
EDEL 619	Contemporary Thoughts in English Education	3
ELED 620	Quantitative Research in English Language Education	3
EDEL 629	Issues in English Language Education	3
ELED 630	Qualitative Research in English Language Education	3
ELED 631	English and the Postcolonial Discourses	3
ELED 632	English in Nepal	3
EDEL 639	Trends in Applied Linguistics	3
ELED 640	Mixed Methods Research in English Language Education	3
EDUC 650	Transformative Education Research and Practice	3
EDUC 652	Statistical Methods in Research	3
EDUC 662	World English's	3

## PhD in STEAM Education

Course Code	Courses	Credit
STEAM ED 600	Lenses of STEAM Education	3
STEAM ED 611	Curricula in STEAM Education	3
STEAM ED 615	Teaching and Learning in STEM Education	3
STEAM ED 620	Reflective Practice in STEAM Education	3
STEAM ED 625	Quantitative Research in STEAM Education	3
STEAM ED 630	Qualitative Research in STEAM Education	3
EDUC 640	Mixed Methods Research	3
EDUC 650	Transformative Education Research and Practice	3
EDUC 660	Participatory Action Research	3

## **PhD in Educational Leadership**

Doctor of Philosophy (PhD.) in Educational Leadership is a rigorous program of advanced study and research. This program intends to produce graduates who can conduct research independently at a high level of originality and quality. This program offers the candidates a substantial grounding in high-quality research and analytical skills in educational leadership. The program aims to cultivate graduates' critical, discursive, analytical, creative, and innovative skills through sharing, reflecting, advocating.

### **EDUC 600: Educational Dimensions (3)**

The course aims students to acquaint educational praxes through the autobiographical, curricular/pedagogical, sociocultural, political, and philosophical dimensions. The autobiographical dimension enables research students to explore their lived experience as educational practitioners through the lenses of adult learning, reflective practice and Freirean notion of conscientization. Likewise, the curricular/pedagogical dimension deals with different concepts related to curricular and pedagogical traditions arising from prescriptive, descriptive and critical curricular/pedagogical traditions. The sociocultural dimension deals with ideas pertaining to situated cognition and education as social/cultural process. Whereas the political dimension draws from the Reconstructionist and Freirean schools, the philosophical dimensions unpacks Pragmatism, Perennialism, Constructivism and beyond.

### **EDUC 611: Academic Writing and Research (3)**

This course is designed to equip students with the skills necessary for researching, reading and writing academic papers. During this course, the students will follow the process of engaging in essentials of academic writing, APA citation and referencing, and maintaining accuracy and structural integrity of academic papers. The course also gives a special emphasis on reading skills necessary for engagement in an issue and literature review while writing. The course aims to empower the students with the skills for writing course papers across different subjects introduced at this level.

### **EDUC 620: Research Methods (3)**

This course aims at offering an introduction to research methods for MPhil/PhD students. Students will learn about basics of research methods, the philosophical and theoretical underpinnings of qualitative, quantitative and mixed methods research. In particular, this course will help the students to apply their understanding of research, identifying and stating the research problem, formulating research questions, and designing the entire process of research to write a report independently. At the end of the course, the students can write a coherent research proposal establishing a clear relationship between the what (research problem/agenda) and the how (methodology) of research, able to locate their research considering the major paradigms, and develop competency of applying their preferred method in practice.

### **EDUC 621 :Advanced Qualitative Research Methods (3)\***

The course aims at enabling research students with skills, knowledge and understanding of qualitative research traditions, methods and techniques, thereby developing research capabilities in problematizing research issues, conceptualizing theoretical perspectives, developing research design and analyzing and interpreting qualitative data. Furthermore, the course also aims research students to develop knowledge and skills necessary for applying appropriate quality and ethical standards for their research projects. Key topics of this course include: Overview of qualitative research traditions, key paradigms and worldviews, problematizing in qualitative research, research designs, interpreting qualitative data and maintaining ethical and quality standards

### **EDUC 622 :Advanced Quantitative Research Methods (3)\***

This is an advanced level course designed for students with a prior background in basic statistics. The course introduces advanced statistical tools and techniques used in educational research so that students can apply their knowledge and skills for their research work. The aim of the course is to develop advanced use of statistical techniques and models in

educational and social science research and to interpret results using computer software in an independent manner.

### **EDUC 632: Organizational Theory and Behaviors (3)**

This course aims to familiarize students with the key components of organization theory and development and how they link to the leadership development within educational institutions. In addition, an important component of this course will be principles and practices of organization behavior in educational organizational settings focusing on motivation, decision making, organizational change, managing conflict and communication. A main emphasis of this course will be on leading change through educational leadership and development of such leadership culture and practice. As a learning outcome of this course students will be able to reflect, analyze and problematize their own leadership experiences framed and informed by concepts and frameworks within the field of organization behavior and organizational theory to inform potential research.

### **EDUC 640: Mixed Methods Research (3)**

Taking pragmatic philosophy of educational research, this course aims at enabling students to develop foundations in developing knowledge and skills for making meaningful mix of positivistic and non-positivistic research methodologies, methods, tools and techniques. Key topics of the course includes: Philosophy of Mixed-Methods Research, Mixed Methods Research Designs, Mixing Information, and Quality Standards for Mixed Methods Research, Policy Uptake, and Publications.

### **EDUC 642: Human Resource Management and Development in Education (3)**

The strategic management and development of human resources within educational institutions is an important function and a key leadership responsibility to ensure attainment of educational outcomes. This course focuses on extending the students understanding and knowledge of the nature and inter-relationship between human resource management and

development functions (recruitment, induction, performance management, continuing professional development, leadership development, succession planning and compliance of policy and legislation). An attempt will be made to relate principles and theories of each to solve practical problems related to human resource management and development. Students are expected to be able to analyze organizational problems, identify human resource management related problems employees' performance, commitment, satisfaction and motivation. In general, the course will equip students with theoretical concept and management skills to critically examine existing human resource management and development system and practices in Nepal.

### **EDUC 644: Statistical Methods in Education and Social Science Research (3)**

This course is designed for students/researchers to develop knowledge and skills of using descriptive and inferential statistical techniques. This course aims at applying the statistical techniques in educational research. The emphasis of the course is more on interpretation of results and understanding strengths and limitations of different statistical measures. This course also provides hands-on training on the use of statistical software packages.

### **EDUC 650: Transformative Education Research and Practice (3)**

The course aims research students to develop sensibilities on different forms of research that focus on transforming structural aspects of education. Creative uses of different research traditions (positivist, interpretive, critical, postmodern and integral) for improving research and practice of educational (formal, informal, non-formal) contexts will be discussed. The course also draws on wisdom traditions of the East, West, North and South so as to offer ways through which to radically envision empowering education system in National and local context of the research students.

### **EDLE 652: Policy and Governance for Educational Leadership (3)**

This course focuses on the existing and emergent policy issues and theoretical frameworks related to governance in education. The objective is to enhance the conceptual understanding of educational policy, policy analysis and overview of governance mechanisms and practices. Through this course, students will be able to apply these conceptual tools to critically examine and frame contemporary issues for research related to policy and governance of education including financing of education, issues of equity and quality of education, inclusion, diversity, teacher management.

### **EDUC 660: Transformative Education Research and Practice (3)**

The course aims research students to develop sensibilities on different forms of research that focus on transforming structural aspects of education. Creative uses of different research traditions (positivist, interpretive, critical, postmodern and integral) for improving research and practice of educational (formal, informal, non-formal) contexts will be discussed. The course also draws on wisdom traditions of the East, West, North and South so as to offer ways through which to radically envision empowering education system in National and local context of the research students.

## **PhD in Development Studies**

Meeting the 21<sup>st</sup> century challenges and directions for creative development professionals who can apply and integrate critical thinking and practical experiences from a wide range of perspectives and be innovative in seeking meaningful solutions, Ph.D. in Development Studies has been introduced. The purpose of this program is to emphasize the capacity building of national and international scholars whose research is likely to become a basis for improving practices in their professions and could contribute to the development sector at local, national, and global levels. The program further aims to equip them with analytical and practical skills to engage in development issues critically, debate from an interdisciplinary perspective and work across the intersections of development policy, research, and practice.

The program's objective is to enable students to engage in social transformation processes utilizing research based expertise and critical and comparative analysis.

### **DEVP 611: Sociology of Education and Development (3)**

The main aim of this course is to help students develop a conceptual, reflective, critical creative and imaginative understanding of sociology of development and education. It is expected from the students to understand socio-cultural dynamics of development with different theoretical perspectives. Specifically, this course intends to discuss with some of the key theories (Western and Local) to understand development and education processes and institutions in Nepalese society. The role of society and culture has been focused as a space where development and education process take place which influence different forms of development. Likewise, the course intends to explore the experience of various stakeholders of development practitioners.

### **EDUC 611: Academic Writing and Research (3)**

This course is designed to equip students with the skills necessary for researching, reading and writing academic papers. During this course, the students will follow the process of engaging in essentials of academic writing, APA citation and referencing, and maintaining accuracy and structural integrity of academic papers. The course also gives a special emphasis on reading skills necessary for engagement in an issue and literature review while writing. The course aims to empower the students with the skills for writing course papers across different subjects introduced at this level.

### **EDUC 620: Research Methods (3)**

This course aims at offering an introduction to research methods for MPhil/PhD students. Students will learn about basics of research methods, the philosophical and theoretical underpinnings of qualitative, quantitative and mixed methods research. In particular, this course will help the students to apply their understanding of research, identifying and stating



the research problem, formulating research questions, and designing the entire process of research to write a report independently. At the end of the course, the students can write a coherent research proposal establishing a clear relationship between the what (research problem/agenda) and the how (methodology) of research, able to locate their research considering the major paradigms, and develop competency of applying their preferred method in practice.

### **DEVP 621: Development Policy and Planning (3)**

Development planning, policies and implementation are closely interconnected. A dialectic process takes place during these interactions – influencing the other and receiving influences from others. This course is designed to help students understand these dialectic interactions – how the key societal processes interact and influence the other equally important for development planning and policies. The course intends to develop critical understanding among students about how are policies and planning are rooted in the wider societal contexts, particularly in relation to the issues of development. The course, thus, helps students realize the wider process of policy formation, planning and implementation of development programs and projects. The course specifically deals with different meanings, concepts and theories of development planning and policies, development agencies and different other facets in national, regional and local level in relation to social agency, exclusion, poverty, caste, gender, etc. as well as aspects like social capital, civil society, decentralization, participation, etc. The issue of development plan and policies analyzed from the various roles of power dynamics.

### **EDUC 621 :Advanced Qualitative Research Methods (3)**

The course aims at enabling research students with skills, knowledge and understanding of qualitative research traditions, methods and techniques, thereby developing research capabilities in problematizing research issues, conceptualizing theoretical perspectives, developing research design and analyzing and interpreting qualitative data. Furthermore, the course also aims research students to develop knowledge and skills necessary for applying

appropriate quality and ethical standards for their research projects. Key topics of this course include: Overview of qualitative research traditions, key paradigms and worldviews, problematizing in qualitative research, research designs, interpreting qualitative data and maintaining ethical and quality standards

### **EDUC 622 :Advanced Quantitative Research Methods (3)**

This is an advanced level course designed for students with a prior background in basic statistics. The course introduces advanced statistical tools and techniques used in educational research so that students can apply their knowledge and skills for their research work. The aim of the course is to develop advanced use of statistical techniques and models in educational and social science research and to interpret results using computer software in an independent manner.

### **DEVP 631: Development Theory and Practice (3)**

The course intends to develop critical understanding among students about how the schooling or education interacts in the wider societal contexts, particularly in relation to the issues of development. The course, thus, helps students realize the wider societal meanings of education or schooling so that they could critically assess the role of schooling or education in bringing change in development perceptions and practices. In order to help students, understand these processes in a more meaningful manner, the course deals with the different meanings of development. Development is very closely linked with our everyday life situations. In one-way or the other, we experience and encounter with this concept. Yet, it has been a very complex concept and is thus difficult to understand with one single meaning. The course takes these different meanings of development both at theoretical and conceptual level and at the level of everyday understanding of the people.

### **EDUC 640: Mixed Methods Research (3)**

Taking pragmatic philosophy of educational research, this course aims at enabling students to develop foundations in developing knowledge and skills for making meaningful mix of positivistic and non-positivistic research methodologies, methods, tools and techniques. Key topics of the course includes: Philosophy of Mixed-Methods Research, Mixed Methods Research Designs, Mixing Information, and Quality Standards for Mixed Methods Research, Policy Uptake, and Publications.

### **EDUC 644: Statistical Methods in Education and Social Science Research (3)**

This course is designed for students/researchers to develop knowledge and skills of using descriptive and inferential statistical techniques. This course aims at applying the statistical techniques in educational research. The emphasis of the course is more on interpretation of results and understanding strengths and limitations of different statistical measures. This course also provides hands-on training on the use of statistical software packages.

### **EDUC 650: Transformative Education Research and Practice (3)**

The course aims research students to develop sensibilities on different forms of research that focus on transforming structural aspects of education. Creative uses of different research traditions (positivist, interpretive, critical, postmodern and integral) for improving research and practice of educational (formal, informal, non-formal) contexts will be discussed. The course also draws on wisdom traditions of the East, West, North and South so as to offer ways through which to radically envision empowering education system in National and local context of the research students.

### **EDUC 660 Participatory Action Research (3)**

The course aims for research students to develop an acquaintance with the philosophy and practice of participatory action research. Specifically, the course comprises four major strands

that are grounded in the transformative intent of participatory action research, axiology of participatory action research, appreciative inquiry, and participatory research designs. The transformative intent of PAR is guided by the notion of educational change as/for public good in which the axiology of public good comes into play. An important dimension of appreciative inquiry is reflected in collaborating with co-researchers in a productive and appreciative manner. Likewise, the course enables research students to come up with participatory action research designs, thereby trialing them in an appropriate context and community.

## **PhD in English Language Education**

As a response to the changing needs in the field of English language education, the Department of Language Education launched PhD in English Language Education program in 2020. This program made a departure by putting less emphasis on coursework and increased focus on substantial research related requirements, leading to a thesis on a substantive area of specialization. The dissertation entails an independent, original, and closely defined research project carried out under the mentoring of an assigned supervisor. By its nature, the purpose of this 40-50 credit program is to emphasize the capacity building of potential research of Nepali and international scholars whose works are likely to become a basis for improving practices in their professions.

### **EDUC 600: Educational Dimensions (3)**

The course aims students to acquaint educational praxes through the autobiographical, curricular/pedagogical, sociocultural, political, and philosophical dimensions. The autobiographical dimension enables research students to explore their lived experience as educational practitioners through the lenses of adult learning, reflective practice and Freirean notion of conscientization. Likewise, the curricular/pedagogical dimension deals with different concepts related to curricular and pedagogical traditions arising from prescriptive, descriptive and critical curricular/pedagogical traditions. The sociocultural dimension deals with ideas pertaining to situated cognition and education as social/cultural process. Whereas the political dimension draws from the Reconstructionist and Freirean schools, the philosophical dimensions unpacks Pragmatism, Perennialism, Constructivism and beyond.

### **EDEL 609 : Language Teacher Education and Development (3)**

This course is designed for English teacher education planners, managers, trainers and educators working in formal and non-formal training, education, and teacher development. It will look into the language teacher education and development practices at the universities, state sector and non-state sector. Students will explore how the teacher education programme are developed and run and the challenge that face the stakeholders. This course will also

develop in students' general philosophy of teacher development and skills required to help teacher development. The areas addressed by the course will be teacher training, observation and feedback, continuing professional development and mentoring.

### **EDEL 619 :Contemporary Thoughts in English Education (3)**

The course on Contemporary Thoughts in English Language Education is interdisciplinary in nature. Locating English language education in post-colonial era, this course takes in the discourses of politics of post-colonial English, globalization and English and English in South Asia. English has been in Nepal for more than 200 years and it has influenced Nepalese society in many different ways. The course encourages the students to conduct research applying the theories of post-colonialism to understand the impacts of English in different aspects of our life. The course is divided into four modules— theories of post-colonialism, politics of English, English and globalization and English in South Asia.

### **ELED 620 : Quantitative Research in English Language Education (3)**

This is an advanced level course designed for students with a prior background in basic statistics. The course introduces advanced statistical tools and techniques used in educational research so that students can apply their knowledge and skills for their research work. The aim of the course is to develop advanced use of statistical techniques and models in educational and social science research and to interpret results using computer software in an independent manner

### **EDEL 629: Issues in English Language Education (3)**

English Language teaching has a long history. It has undergone several changes in the international setting which has also impacted in the Nepalese ELT. Methods have come and have run their course. Socio-political issues have impacted the English language education which is considered by the policy makers and practitioners. Globalization and contextualization have become strong dichotomies whereas NEST and NNEST issues are also some of the issues which need academic attention. Therefore, the emphasis in this course is

on analysis historical and contemporary issues in English teaching and learning. In addition to equipping students with the latest trends and issues in English Language Education. This course will also promote on research based decision making on ELT pedagogies.

### **ELED 630 : Qualitative Research in English Language Education (3)**

The course aims at enabling research students with skills, knowledge and understanding of qualitative research traditions, methods and techniques, thereby developing research capabilities in problematizing research issues, conceptualizing theoretical perspectives, developing research design and analyzing and interpreting qualitative data. Furthermore, the course also aims research students to develop knowledge and skills necessary for applying appropriate quality and ethical standards for their research projects. Key topics of this course include: Overview of qualitative research traditions, key paradigms and worldviews, problematizing in qualitative research, research designs, interpreting qualitative data and maintaining ethical and quality standards.

### **ELED 631- English and the Postcolonial Discourse**

ELED 631- English and the Postcolonial Discourse aims at familiarizing the students with the discourse of colonialism, anti-colonialism and the cultural legacies resisting the impacts of colonial influences in indigenous communities. After introducing the major intellectuals of post-colonial discourse more particularly Michel Foucault, Gayatri Spivak, Homi K Bhabha, Franz Fanon, Ngugi, the course leads the scholars to critic the impact of English in socio-cultural practices of indigenous communities. The course is divided into four modules. Module I introduces the discourse of contributions of Foucault and Said to postcolonial studies. Module II discusses the postcolonial perspectives from South Asia and Africa covering Spivak, Bhabha and Fanon. Module III familiarizes the methodological procedure of critical discourse analysis (CDA). Module IV is devoted to critic the existing practices of media, government educational practices, local literature, etc. using CDA within the theoretical insights post colonialism.

### **ELED 632- English in Nepal**

This course is designed for English language teachers, researchers, policymakers working in different sectors of society such as school and university education, government employees working in ministries that directly involve in educational policymaking, non-governmental organizations interested in education sectors of Nepal. The course is divided into four modules: Module I critically examines the historical events of Nepal that created space for the English language in Nepali society. Module II reviews the major theories of New Englishes beginning with Kacharu and Schneider as per the need. Module III investigates linguistic patterns of English in Nepal. Module IV is devoted to the fieldwork in which the students gather data from English in Nepal in different aspect of Nepali life such as media, literature, academic discourse, social media, etc.

### **EDEL 639: Trends in Applied Linguistics (3)**

The course on Trends in Applied Linguistics encompasses a wide range of trends in the contributions of linguistics to language teaching. The focus is on exploring and analyzing the trends and theories of applied linguistics to address the current concerns of English language education in the context of Nepal. The course is designed to encourage the students in research in English language education integrating the theories of applied linguistics, critical discourse analysis and information and technology in language learning. The course is divided into four modules language education and applied linguistics, theories of language learning, critical discourse analysis and computer-aided language learning.

### **EDUC 640: Mixed Methods Research in Education (3)**

Taking pragmatic philosophy of educational research, this course aims at enabling students to develop foundations in developing knowledge and skills for making meaningful mix of positivistic and non-positivistic research methodologies, methods, tools and techniques. Key topics of the course includes: Philosophy of Mixed-Methods Research, Mixed Methods



Research Designs, Mixing Information, and Quality Standards for Mixed Methods Research, Policy Uptake, and Publications.

### **EDUC 650: Transformative Education Research and Practice (3)**

The course aims research students to develop sensibilities on different forms of research that focus on transforming structural aspects of education. Creative uses of different research traditions (positivist, interpretive, critical, postmodern and integral) for improving research and practice of educational (formal, informal, non-formal) contexts will be discussed. The course also draws on wisdom traditions of the East, West, North and South so as to offer ways through which to radically envision empowering education system in National and local context of the research students.

### **EDUC 652: Statistical Methods in Research (3)**

This course is designed for students/researchers to develop knowledge and skills of using descriptive and inferential statistical techniques. This course aims at applying the statistical techniques in educational research. The emphasis of the course is more on interpretation of results and understanding strengths and limitations of different statistical measures. This course also provides hands-on training on the use of statistical software packages.

### **EDUC 662: World Englishes (3)**

English language education has been increasing its scope in the globe in recent areas. The course aims to recognize the continuous spread of Englishes which have given rise to different varieties of English languages around which is contested and de-familiarized the Standard English. In doing so, the course usages the curriculum from the several kinds of materials written in the varieties of English languages. The course prepares students to recognize the Englishes around the world with respecting social inclusion and justice.

## **PhD in STEAM Education**

The PhD in STEAM (Science, Technology, Engineering, Arts and Mathematics) Education reflects the rigorous research based, interdisciplinary, and contemporary academic program in the field of teacher education. By its nature, the purpose is to emphasize on capacity building of potential STEAM educators, researchers, and academicians from Nepal and abroad, whose research is likely to become a basis for improving practices in their academic professions by utilizing the perspectives and practices arising from intersections of Science, Technology, Engineering, Arts and Mathematics Education. Given this perspective, the School can enroll qualified post-graduate students in STEAM education from diverse fields of STEM related (e.g., Mathematics, Mathematics Education, Physics, Economics, Chemistry, Science Education, Engineering, Technology, Health Sciences, Physical Sciences) in the program to address the needs of producing human resources in integrated and multidisciplinary research and practice in education. The School has the relevant faculty members and/ or it can outsource from among the international partner institutions. More so, international experts in the field can also be invited for short-term visits to enhance the research capacity of our research students and faculty members. It offers rigorous theoretical and practical orientation for practitioners aspiring to become leaders in fields associated with STEAM Education.

### **STEAM ED 600: Lenses of STEAM Education (3)**

With an aim of enabling MPhil/PhD students in STEAM Education by acquainting with different lenses of STEAM education, this course enables them to explore autobiographical, pedagogical, socio-political and philosophical lenses of STEAM education. The course begins with the autobiographical lens of STEAM education to unpack students' personal-professional experiences as different life-roles, such as students, teachers, teacher-educators, and researchers. The second lens offers a space for learners to discuss possible pedagogical strategies that they have been and will be applying in their professional contexts. Indeed, this third module enables to discuss how a critical social theory perspective contributes to understand STEAM education as an activity shaped and facilitated by individuals embedded in their professional contexts. Taking the notion of power at the center stage, the module delineates how STEAM education can be employed as a means for transforming lives of many, if not all. Taking STEAM Education as/for sustainable development (e.g., ecology of perspectives and knowledge systems, ethics as the first philosophy, systems thinking), the

philosophical lens is set to enable scholars to identify the role of philosophical perspectives in transforming STEAM as unchanging and fragmentary disciplines to an integrated and dynamic knowledge system.

### **STEAM ED 611: Curricula in STEAM Education (3)**

With an aim of enabling MPhil/PhD students in STEAM Education by familiarizing with various curricular lenses, this course is developed with the notion that curriculum is not an end in itself but rather a means of fostering quality (e.g., curriculum as a process, curriculum as currere, etc.) learning. Here, curriculum is viewed as a political and social (dis)agreement that reflects a society's common vision while taking into account local, national and global needs and expectations. The elements of the STEAM curriculum are STEAM values and ethics that consist of the integrated approaches of leaning engaging with the real-world tasks activities. The course provides students with powerful conceptual tools for exploring a variety of ways in which curriculum is understood, both in the relevant STEAM literature and in their own professional experience. These tools include various curricular metaphors, imaginative understanding and previsioning. Students will have opportunities to develop a critical understanding of their own extant images of curriculum and the way they have been shaped historically by social, political and economic influences. By constructing an image of an ideal STEAM curriculum, students will engage in re-visioning their professional practices. And finally, by examining strengths and limitations of outcomes-based education, having an orientation with STEAM Education, in relation to emerging curriculum visions such as curriculum integration, eco-pedagogy/eco-justice and inclusive logics, students will be able to develop a vision of curriculum for their own professional contexts taking leadership in educational institutions thereby developing institution based curriculum

### **STEAM ED 615: Teaching and Learning in STEAM Education (3)**

With an aim of enabling MPhil/PhD students in STEAM Education by acquainting with the various teaching and learning approaches (inquiry-based, project-based, problem-based, etc.) Keeping the notion of STEAM-related skills (science process skills, science manipulative

skills, computational thinking skills, reasoning skills, engineering design thinking skills and ICT skills) at the center, the course deals with the inquiry-based approaches, project-based learning and digital learning. Inquiry-based approach promotes STEAM disciplines to enable students to engage in authentic and meaningful activities that help to improve mathematical reasoning. The Project-based learning enables students to develop 21st century competencies including resilience, coping with uncertainty, self-reliance, and creativity by interacting with the real-world activities. The digital learning is modern learning environments that enable students to develop their technological literacy and critical thinking skills throughout their daily learning activities. During the course, the students will be able to envisage the better teaching and learning approaches as pedagogical innovations to transform the existing teaching and learning practices.

### **STEAM ED 620: Reflective practice in STEAM Education (3)**

Drawing upon the extant and historical literature of reflective practice, the main purpose of this course is to enable MPhil/PhD students to develop ethical conduct, mindful actions and resilience in different situations to become an active inquirer. This course is developed with the notion that STEAM education develops students as reflective practitioners through Transformative Learning (TL) approach. Out of many TL approaches, this course focuses the five interconnected ways of knowing: cultural self-knowing, relational knowing, critical knowing, visionary and ethical knowing, knowing in action. In doing so, the critical autobiographical reflection is considered as a point of departure towards envisaging the future professional performances that provides enough spaces to challenge the status quo being aware with the various dis/empowering forces to improve the educational practices. This course aims students to becoming as reflective citizen by engaging in reflection in action, reflection on action, and reflection for action in an integrated approach to cultivate creative and imaginative thinking in education.

### **STEAM ED 625 : Quantitative Research in STEAM Education (3)**

This is an advanced level course designed for students with a prior background in basic statistics. The course introduces advanced statistical tools and techniques used in educational research so that students can apply their knowledge and skills for their research work. The aim of the course is to develop advanced use of statistical techniques and models in educational and social science research and to interpret results using computer software in an independent manner.

### **STEAM ED 630 : Qualitative Research in STEAM Education (3)**

The course aims at enabling research students with skills, knowledge and understanding of qualitative research traditions, methods and techniques, thereby developing research capabilities in problematizing research issues, conceptualizing theoretical perspectives, developing research design and analyzing and interpreting qualitative data. Furthermore, the course also aims research students to develop knowledge and skills necessary for applying appropriate quality and ethical standards for their research projects. Key topics of this course include: Overview of qualitative research traditions, key paradigms and worldviews, problematizing in qualitative research, research designs, interpreting qualitative data and maintaining ethical and quality standards

### **EDUC 640: Mixed Method Research (3)**

Taking pragmatic philosophy of educational research, this course aims at enabling MPhil students to develop foundations in developing knowledge and skills for making meaningful mix of positivistic and non-positivistic research methodologies, methods, tools and techniques. Key topics of the course includes: Philosophy of Mixed-Methods Research, Mixed Methods Research Designs, Mixing Information, and Quality Standards for Mixed Methods Research, Policy Uptake, and Publications.

### **EDUC 650: Transformative Education Research and Practice (3)**

The course aims research students to develop sensibilities on different forms of research that focus on transforming structural aspects of education. Creative uses of different research traditions (positivist, interpretive, critical, postmodern and integral) for improving research and practice of educational (formal, informal, non-formal) contexts will be discussed. The course also draws on wisdom traditions of the East, West, North and South so as to offer ways through which to radically envision empowering education system in National and local context of the research students.

### **EDUC 660: Participatory Action Research (3)**

The course aims for research students to develop an acquaintance with the philosophy and practice of participatory action research. Specifically, the course comprises four major strands that are grounded in the transformative intent of participatory action research, axiology of participatory action research, appreciative inquiry, and participatory research designs. The transformative intent of PAR is guided by the notion of educational change as/for public good in which the axiology of public good comes into play. An important dimension of appreciative inquiry is reflected in collaborating with co-researchers in a productive and appreciative manner. Likewise, the course enables research students to come up with participatory action research designs, thereby trialing them in an appropriate context and community.