

Bachelor of Engineering in Data Science and Engineering [BEng(DS&E)]: Programme Learning Outcomes

Programme Learning Outcomes

Upon successful completion of the curriculum, students should be able to:

PLO(a) - apply knowledge of data science and engineering technologies to data science applications appropriate to the programme outcomes and to the discipline

PLO(b) - apply knowledge of data science and engineering technologies to the abstraction and conceptualization of data science applications

PLO(c) - analyze a data-centric problem, and identify and define the data science and engineering methodologies and technologies appropriate to its solution

PLO(d) - design, implement, and evaluate a data science solution, process, component, or programme to meet desired needs with appropriate consideration for public health and safety, social and environmental considerations

PLO(e) - function effectively on teams to accomplish a common goal

PLO(f) - demonstrate an understanding of professional, ethical, legal, security and social issues and responsibilities

PLO(g) - communicate effectively with a range of audiences

PLO(h) - analyze the local and global impact of data science technology on individuals, organizations, and society

PLO(i) - recognize the need for and an ability to engage in continuing professional development

PLO(j) - use current techniques, skills, and tools necessary for data science and engineering practice with an understanding of the limitations

Programme Learning Outcomes (PLOs) mapped against University Education Aims (UEAs)

Curriculum Level Outcomes	University Educational Aims
<p>Upon successful completion of the curriculum, students should be able to:</p> <p>PLO(a) - apply knowledge of data science and engineering technologies to data science applications appropriate to the programme outcomes and to the discipline</p> <p>PLO(b) - apply knowledge of data science and engineering technologies to the abstraction and conceptualization of data science applications</p> <p>PLO(c) - analyze a data-centric problem, and identify and define the data science and engineering methodologies and technologies appropriate to its solution</p> <p>PLO(d) - design, implement, and evaluate a data science solution, process, component, or programme to meet desired needs with appropriate consideration for public health and safety, social and environmental considerations</p> <p>PLO(i) - recognize the need for and an ability to engage in continuing professional development</p> <p>PLO(j) - use current techniques, skills, and tools necessary for data science and engineering practice with an understanding of the limitations</p>	<p>University Educational Aim 1.</p> <ul style="list-style-type: none"> To enable our students to develop their capabilities in pursuit of academic/professional excellence, critical intellectual enquiry and life-long learning
<p>Upon successful completion of the curriculum, students should be able to:</p> <p>PLO(c) - analyze a data-centric problem, and identify and define the data science and engineering methodologies and technologies appropriate to its solution</p> <p>PLO(j) - use current techniques, skills, and tools necessary for data science and engineering practice with an understanding of the limitations</p>	<p>University Educational Aim 2.</p> <ul style="list-style-type: none"> To enable our students to develop their capabilities in tackling novel situations and ill-defined problems
<p>Upon successful completion of the curriculum, students should be able to:</p> <p>PLO(f) - demonstrate an understanding of professional, ethical, legal, security and social issues and responsibilities</p> <p>PLO(h) - analyze the local and global impact of data science technology on individuals, organizations, and society</p>	<p>University Educational Aim 3.</p> <ul style="list-style-type: none"> To enable our students to develop their capabilities in critical self-reflection, greater understanding of others, and upholding personal and professional ethics

<p>Upon successful completion of the curriculum, students should be able to:</p> <p>PLO(f) - demonstrate an understanding of professional, ethical, legal, security and social issues and responsibilities PLO(g) - communicate effectively with a range of audiences PLO(h) - analyze the local and global impact of data science technology on individuals, organizations, and society</p>	<p>University Educational Aim 4.</p> <ul style="list-style-type: none"> • To enable our students to develop their capabilities in intercultural communication and global citizenship
<p>Upon successful completion of the curriculum, students should be able to:</p> <p>PLO(e) - function effectively on teams to accomplish a common goal PLO(g) - communicate effectively with a range of audiences</p>	<p>University Educational Aim 5.</p> <ul style="list-style-type: none"> • To enable our students to develop their capabilities in communication and collaboration
<p>Upon successful completion of the curriculum, students should be able to:</p> <p>PLO(d) - design, implement, and evaluate a data science solution, process, component, or programme to meet desired needs with appropriate consideration for public health and safety, social and environmental considerations PLO(e) - function effectively on teams to accomplish a common goal PLO(h) - analyze the local and global impact of data science technology on individuals, organizations, and society</p>	<p>University Educational Aim 6.</p> <ul style="list-style-type: none"> • To enable our students to develop their capabilities in leadership and advocacy for the improvement of the human condition