Ability-Linked Opportunities for B.Tech students: a Dual Degree

B. Tech students can register for between 12 and 26 credits each Semester, with a maximum of two Semesters allowed for 28 credits. The Courses of Study document lists two capability-linked opportunities for an enhanced B.Tech, in two ways:

a. Minor/Inter-disciplinary area specialisation
b. Departmental Specialisation

A student can earn additional credits in two blocks of 20 credits to opt for either or both of the above, which will also be mentioned on the degree itself. (For either, a student can use the 10 credit OC courses towards a Minor/Inter-disciplinary area, and./or a Departmental Specialisation). For instance, the Courses of Study document lists two modalities:

1. 26 credits in each Semester after the first year, which enables a student to complete 17*2 + 26*6 = 190 credits in 4 years
2. 24 credits in each Semester after the first year (if the CGPA >=7.0 requirement is not met, but the number of credits is 20*N, where N is the number of Semesters after the first year), which enables a student to complete 17*2 + 24*6 = 178 credits in 4 years

An interesting value-addition can be with the 10 OC credits, doing an additional 41 credits to get an additional M.Tech degree in a total of 5 year time period,
A B.Tech student will be elligible for a Dual Degree programme, if the CGPA at the end of the 3rd year (Semester VI) is at least 7.5.
Dual Degree students will get the scheduled Teaching Assistantship monetary benefits on completion of 135 credits, with a valid GATE score, or CGPA at least 8.0. This will be valid for a maximum for 14 months from the Summer Semester after the 4th year (Semester VIII), provided the student is registered for the M.Tech Major Project, with 8 hours per week TA duty, SGPA at least 7.0 in each Semester, and an allowance for 30 days leave in a year.

Key to the tables below, which specifically considers the EE1 and EE3 curriculum, and a possible conversion to the Dual Degree programme:

The first column indicates the Semester, and the last one, the number of credits
EE1 indicates the B.Tech Electrical Engineering Programme
EE3 indicates the B.Tech Electrical Engineering Power and Automation Programme
DD1 indicates specific options for EE1 entry students who have opted for a Dual Degree
DD3 indicates specific options for EE3 entry students who have opted for a Dual Degree
DD indicates a schedule common to all Dual Degree students
The schedules for Semesters I and II are interchangeable for half the batch
These courses are common to all students in EE
The colour black indicates courses common to all
The colour blue indicates courses specific to the EE1 programme
The colour green indicates courses specific to the EE3 programme
The colour red indicates courses specific to the Dual Degree programme

									Credits
I	ELL100 Intro to EE (3-0-2) =4	MCP100 Engg Vis (0.5-0-3) =2	PYL100 EM & QM (3-0-0) =3	MTL100 Calculus (3-1-0) =4	PYP100 Phy Lab (0-0-4) =2	MCP101 Manuf (0-0-4) =2			**17**
II	APL100 Engg Mech (3-1-0) =4	COL100 Intro to CS (3-0-2) =4	CML100 Intro to Chem (3-0-0) =3	MTL101 LinAL & DiffEs (3-1-0) =4	CMP100 Chem Lab (0-0-4) =2				**17**

EE1 : III	ELL202 Ckt Th (3-1-0) =4	COL106 DS & Algo (3-0-4) =5	ELL203 Electro Mech (3-1-0) =4	ELL211 Phy El (3-0-0) =3	ELL205 Sig Sys (3-1-0) =4	HUL2xx (3-1-0) =4			**24**
EE3 :III	ELL202 Ckt Th (3-1-0) =4	COL106 DS & Algo (3-0-4) =5	ELL203 Electro Mech (3-1-0) =4	SBL100 Intro Bio (3-0-2) =4	ELL205 Sig Sys (3-1-0) =4				**21**

EE1 : IV	ELL201 Dig El (3-0-3) =4.5	ELL212 Engg EMag (3-1-0) =4	SBL100 Intro Bio (3-0-2) =4	MTL106 Prob Stoch (3-1-0) =4	ELL225 Control-I (3-1-0) =4	ELP203 EMech Lab (0-0-3) =1.5			**22**
EE3 : IV	ELL201 Dig El (3-0-3) =4.5	ELL231 PEl & Energy (3-0-0) =3	CVL100 Env Sc (2-0-0) =2	MTL106 Prob Stoch (3-1-0) =4	ELL225 Control-I (3-1-0) =4	ELP203 EMech Lab (0-0-3)= 1.5	HUL2xx (3-1-0) =4		**23**

EE1 : V	ELL304 Analog (3-1-3) =5.5	ELL302 Power El (3-0-0) =3	ELL305 Comp Arch (3-0-0) =3	ELP225 Control Lab (0-0-3) =1.5	ELL311 Comm (3-1-0) =4	ELP212 EMag Lab (0-0-3) =1.5	CVL100 Env Sc (2-0-0) =2		**20.5**
EE3 : V	ELL304 Analog (3-1-3) =5.5	ELL302 Power El (3-0-0) =3	ELL305 Comp Arch (3-0-0) =3	ELP225 Control Lab (0-0-3)	HUL2xx (3-1-0) =4	DE1 (3-0-2) =4			**21**

				=1.5					

EE1 : VI	MCL142 Thermal (3-0-0) =3	PYL102 Materials (3-0-0) =3	ELL303 Power-1 ((3-1-0) =4	ELP305 Design SysLab (0-0-3) =1.5	ELP302 PowerEl Lab (0-0-3) 1.5	ELP311 Comm Lab (0-0-2) =1	HUL2xx (3-1-0) =4	DE1 (3-0-2) =4	**22**
EE3 : VI	MCL142 Thermal (3-0-0) =3	PYL102 Materials (3-0-0) =3	ELL303 Power-1 ((3-1-0) =4	ELP305 Design SysLab (0-0-3) =1.5	ELP302 PowerEl Lab (0-0-3) 1.5	ELL365 Emb (3-0-0) =3	ELL332 Drives (3-0-0) =3		**19**

EE1 : VII	HUL2xx (3-1-0) =4	ELP303 Power Lab (0-0-3) =1.5	ELD411 BTP-I (0-0-6) =3	DE2 (3-0-0) =3	OC1 (3-0-2) =4				**15.5**
DD1 : VII	HUL2xx (3-1-0) =4	ELP303 Power Lab (0-0-3) =1.5	ELD411 BTP-I (0-0-6) =3	DE2 (3-0-0) =3	PE1 (3-0-0) =3	PE2 (3-0-0) =3	PE3 (3-0-0) =3		**11.5+9 =20.5**
EE3 : VII	HUL2xx (3-1-0) =4	ELL363 Power-II (3-0-0) =3	ELD431 BTP-I (0-0-6) =3	ELP303 Power Lab (0-0-3) =1.5	ELP372 Drives Lab (0-0-3) =1.5	OC1 (3-0-2) =4			**17**
DD3 : VII	HUL2xx (3-1-0) =4	ELL363 Power-II (3-0-0) =3	ELD431 BTP-I (0-0-6) =3	ELP303 Power Lab (0-0-3) =1.5	ELP372 Drives Lab (0-0-3) =1.5	PE1 (3-0-0) =3	PE2 (3-0-0) =3	PE3 (3-0-0) =3	**13+9 =22**

EE1 : VIII	HUL3xx (3-0-0) =4	DE3 (3-0-0) =3	OC2 (3-0-2) =4	OC3 (3-0-2) =4					**12**
DD1 : VIII	HUL3xx (3-0-0) =3	DE3 (3-0-0) =3	PC1: ELL783 OS (3-0-2) =4	PC2 ELD780 MinorP (0-0-4) =2	PE4 (3-0-0) =3	PE5 (3-0-0) =3			**6+6+6 =18**
EE3 : VIII	HUL3xx (3-0-0) =3	DE2 (3-0-0) =3	DE3 (3-0-0) =3	OC2 (3-0-0) =3	OC3 (3-0-0) =3				**15**
DD3 : VIII	HUL3xx (3-0-0) =3	DE2 (3-0-0) =3	DE3 (3-0-0) =3	PC1: ELL783 OS (3-0-2) =4	PC2 ELD780 MinorP (0-0-4) =2	PE4 (3-0-0) =3	PE5 (3-0-0) =3		**9+6+6 =21**

DD :IX	PC3 ELD780 MajorP-1 (0-0-12) =6	PE6 (3-0-0) =3	PE7 (3-0-0) =3	PE8 (3-0-0) =3	PE9 (3-0-0) =3				**6+12 =18**

DD :X	PC4 ELD780 MajorP-2 (0-0-24) =12								**12**