

CBCS CURRICULUM (2017-18) (Regulation-C)**Program: B.E Naval architecture & Offshore engineering****List of Courses for –BE-Naval Architecture**

(Semester wise)

Semester 1

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
THEORY								
1.	UBLEC01	Technical English-I	HS	2	2	0	0	2
2.	UBMTC01	Engineering Mathematics-I	BS	4	3	1	0	4
3.	UBPHC01	Engineering Physics-I	BS	3	3	0	0	3
4.	UBCHC01	Engineering Chemistry	BS	3	3	0	0	3
5.	UBMCCPA	Engineering Graphics	ES	4	0	2	2	3
6.	UCITC01	Introduction to Programming in C and C++	ES	3	3	0	0	3
PRACTICALS								
7.	UBWSCPA	Engineering Practices laboratory	BS	2	0	0	2	1
8.	UBCHCPA	Engineering Chemistry laboratory	BS	2	0	0	2	1
9.	UCITCPA	Programming in C nad C++ Lab	ES	2	0	0	2	1
10	UCLECPB	Spoken English - I	EEC	4	0	0	4	2
TOTAL				29	14	3	12	23

Semester II

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
THEORY								
1.	UBLEC02	Technical English-II	HS	2	2	0	0	2
2.	UBMTC02	Engineering Mathematics-II	BS	4	3	1	0	4
3.	UBPHC02	Engineering Physics-II	BS	3	3	0	0	3
4.	UBEEC01	Basics of Electrical & Electronic Engineering	ES	3	3	0	0	3
5.	UBBTC01	Environment Science	HS	2	2	0	0	2
6.	UBMCC03	Engineering Mechanics	ES	4	3	1	0	4
7.	UBMCC11	Thermodynamics	ES	3	3	0	0	3
PRACTICALS								
8.	UBEECPA	Basics of Electrical & Electronics Practical	ES	2	0	0	2	1
9.	UBPHCPA	Engineering Physics laboratory	BS	2	0	0	2	1
10.	UCLECPC	Spoken English - II	EEC	4	0	0	4	2
		TOTAL		29	19	2	8	25

Semester: III

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
THEORY								
1.	UBMTC03	Engineering Mathematics – III	BS	4	3	1	0	4
2.	UCNA301	Fundamentals of Naval Architecture	PC	4	3	1	0	4
3.	UBMCC09	Strength of Materials	ES	3	3	0	0	3
4.	UBMCC04	Fluid Mechanics	ES	3	3	0	0	3
5.	UBEE308	Principles of Marine Electrical Technology	ES	3	3	0	0	3
6.	UBMCC06	Material Science	ES	2	2	0	0	2
PRACTICALS								
7.	UCNA3PA	Ship Design Calculation & Drawing - I (SDCAD - I)	ES	4	0	0	4	2
8.	UBMCCPG	Strength of Materials Laboratory	ES	2	0	0	2	1
9.	UCLECPD	Spoken English - III	EEC	3	0	0	3	2
		TOTAL		28	17	2	19	24

Semester: IV

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
THEORY								
1.	UBMTC04	Probability and Statistics	BS	4	3	1	0	4
2.	UCNA401	Stability of Ships - Theory & Calculations	PC	4	3	1	0	4
3.	UCNA402	Theory of Structures	PC	3	3	0	0	3
4.	UCNA403	Marine Materials and Metal Joining Techniques	PC	3	3	0	0	3
5.	UCNA404	Marine Hydrodynamics	PC	4	4	0	0	4
6.	UCNA405	Fundamentals of Offshore Structures	PC	3	3	0	0	3
PRACTICALS								
7.	UCNA4PA	Ship Design Calculation & Drawing - II (SDCAD - II)	PC	2	0	0	2	1
8.	UCNA4PB	Software Laboratory - I	PC	2	0	0	2	1
9.	UCLECPE	Spoken English - IV	EEC	3	0	0	3	2
		TOTAL		28	19	2	17	25

Semester: V

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
THEORY								
1.	UCNA501	Resistance and Propulsion of Ships	PC	4	4	0	0	4
2.	UCNA502	Strength of Ships	PC	4	4	0	0	4
3.	UCNA503	Design of Offshore Structures	PC	4	4	0	0	4
4.	UBMEC01	Marine Engineering - I	PC	3	3	0	0	3
5.		Department Elective -I	PE	3	3	0	0	3
6.		Open Elective -I	PE	3	3	0	0	3
PRACTICALS								
7.	UCNA5PA	Ship Design Calculation & Drawing - III (SDCAD - III)	PC	4	0	0	4	2
8.	UCNA5PB	Software Laboratory - II	PC	2	0	0	2	1
9.	UBNS5PB	Seamanship Laboratory	PC	2	0	0	2	1
10.	UCLECPA	Professional Ethics and Personality Development - I	EEC	1	0	0	1	0
		TOTAL		30	21	0	09	25
OPEN ELECTIVE								
12	UCNA507	Marine Hydrodynamics	OE	3	3	0	0	3
13	UCNA508	Fundamentals of subsea engineering	OE	3	3	0	0	3
14	UCNA509	Quality Health Safety and Environmental Management	OE	3	3	0	0	3
DEPARTMENT ELECTIVE								
15	UCNA504	Hull survey and Hull Health Monitoring	PE	3	3	0	0	3
16	UCNA505	Foundation of Offshore Structures	PE	3	3	0	0	3
17	UCNA506	Statutory Regulations and Classification Rules	PE	3	3	0	0	3

Semester: VI

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
THEORY								
1.	UCNA601	Seakeeping and Maneuvering of ships	PC	4	4	0	0	4
2.	UCNA602	Structural Design of Ships	PC	4	4	0	0	4
3.	UCNA603	Ship Design - I	PC	4	3	1	0	4
4.	UBMEC02	Marine Engineering - II	PC	3	3	0	0	3
5.		Department Elective -II	PE	3	3	0	0	3
6.		Open Elective -II	PE	3	3	0	0	3
PRACTICALS								
7.	UCNA6PA	Ship Design Calculation & Drawing - IV (SDCAD - IV)	PC	4	0	0	4	2
8.	UBMECPA	Marine Engineering Laboratory	PC	2	0	0	2	1
9.	UCNA6PB	Software Laboratory - III	PC	2	0	0	2	1
10.	UBIVCPZ	Industrial/Shipyard Training	EEC	0	0	0	0	2
11.	UCLECPB	Professional Ethics and Personality Development - II	EEC	1	0	0	1	0
		TOTAL		30	20	01	09	27
OPEN ELECTIVES								
12	UCNA607	Technical Aspects of Ship handling in Ports and Harbours	OE	3	3	0	0	3
13	UCNA608	Elements of Geotechnical Engineering	OE	3	3	0	0	3
14	UCNA609	Work force management in Industry	OE	3	3	0	0	3
DEPARTMENT ELECTIVES								
15	UCNA604	Ship Systems Design	PE	3	3	0	0	3
16	UCNA605	Dynamics of Offshore Structures	PE	3	3	0	0	3
17	UCNA606	Introduction to Finite Element Analysis	PE	3	3	0	0	3

Semester: VII

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
THEORY								
1.	UCNA701	Ship Construction	PC	4	3	1	0	4
2.	UCNA702	Ship Design - II	PC	4	3	1	0	4
3.	UCNA703	Corrosion and Protection Engineering	PC	3	3	0	0	3
4.		Department Elective -III	PE	4	3	1	0	4
PRACTICALS0								
5.	UCNA7PA	Ship Design Calculation & Drawing - V (SDCAD - V)	PC	4	0	0	4	2
6.	UCNA7PB	Project Design & its Methodology (Practical)	EEC	3	0	1	2	2
7	UCNA7PC	Experimental Ship Hydrodynamics	PC	2	0	0	2	1
8	UCNA7PD	Software Laboratory - IV	PC	2	0	0	2	1
9	UCMPCPY	Minor Project	EEC	2	0	0	2	1
		TOTAL		28	12	04	12	22
DEPARTMENT ELECTIVES								
10	UCNA704	Experimental and Ocean Instrumentation	PE	4	3	1	0	4
11	UCNA705	Small and High Speed Craft Design	PE	4	3	1	0	4
12	UCNA706	Introduction to Computational Fluid Dynamics	PE	4	3	1	0	4
13	UCNA707	Submarine Pipeline and Risers	PE	4	3	1	0	4

Semester: VIII

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
THEORY								
1.	UCNA801	Shipyard Practice and Project Management	PC	4	4	0	0	4
PRACTICALS								
2	UBNA8PC	Major project	EEC	22	0	0	22	11
		TOTAL		26	4	0	22	15

TOTAL CREDITS = 184

List of Courses for the Program

(Category wise)

Humanitarian science

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
1	UBLEC01	Technical English - I	HS	2	2	0	0	2
2	UBLEC02	Technical English - II	HS	2	2	0	0	2
3	UBBTC01	Environmental Studies	HS	2	2	0	0	2

Basic Sciences

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
1	UBMTC01	Engineering Mathematics – I	BS	4	3	1	0	4
2	UBPHC01	Engineering Physics - I	BS	3	3	0	0	3
3	UBCHC01	Engineering Chemistry	BS	3	3	0	0	3
4	UBCHCPA	Engineering Chemistry Laboratory	BS	2	0	0	2	1
5	UBMTC02	Engineering Mathematics – II	BS	4	3	1	0	4
6	UBPHC02	Engineering Physics - II	BS	3	3	0	0	3
7	UBPHCPA	Engineering Physics Laboratory	BS	2	0	0	2	1
8	UBWSCP A	Engineering Practices Laboratory	BS	4	0	0	4	2
9	UBMTC03	Engineering Mathematics – III	BS	4	3	1	0	4
10	UBMTC04	Probability and Statistics	BS	4	3	1	0	4

Engineering Science

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
1	UBMCCPA	Engineering Graphics	ES	4	0	2	2	3
2	UBITC01	Fundamentals of Computer Programming	ES	3	3	0	0	3
3	UBITCPA	Fundamentals of Computer Programming Laboratory	ES	2	0	0	2	1
4	UBEEC01	Basics of Electrical & Electronics Engineering	ES	3	3	0	0	3
5	UBEECPA	Basics of Electrical & Electronics Engineering Laboratory	ES	2	0	0	2	1
6	UBMCC03	Engineering Mechanics	ES	4	3	1	0	4
7	UBMCC11	Thermodynamics	ES	3	3	0	0	3
8	UBMCC09	Strength of Materials	ES	3	3	0	0	3
9	UBMCCPG	Strength of Materials Laboratory	ES	2	0	0	2	1
10	UBMCC04	Fluid Mechanics	ES	3	3	0	0	3
11	UBEE308	Principles of Marine Electrical Technology	ES	3	3	0	0	3
12	UBMCC06	Material Science	ES	2	2	0		2

Professional Core

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
1	UCNA301	Fundamentals of Naval Architecture	PC	4	3	1	0	4
2	UCNA3PA	Ship Design Calculation & Drawing - I	PC	4	0	0	4	2
3	UCNA401	Stability of Ships - Theory & Calculations	PC	4	3	1	0	4
4	UCNA402	Theory of Structures	PC	3	3	0	0	3
5	UCNA403	Marine Materials and Metal Joining Techniques	PC	3	3	0	0	3
6	UCNA404	Marine Hydrodynamics	PC	4	4	0	0	4
7	UCNA405	Fundamentals of Offshore Structures	PC	3	3	0	0	3
8	UCNA4PA	Ship Design Calculation & Drawing - II (SDCAD - II)	PC	2	0	0	2	1

9	UCNA4PB	Software Laboratory - I	PC	3	0	0	3	2
10	UCNA501	Resistance and Propulsion of Ships	PC	4	4	0	0	4
11	UCNA502	Strength of Ships	PC	4	4	0	0	4
12	UCNA503	Design of Offshore Structures	PC	4	4	0	0	4
13	UBMEC01	Marine Engineering - I	PC	3	3	0	0	3
14	UCNA5PA	Ship Design Calculation & Drawing - III (SDCAD - III)	PC	4	0	0	4	2
15	UCNA5PB	Software Laboratory - II	PC	2	0	0	2	1
16	UBNS5PB	Seamanship Laboratory	PC	2	0	0	2	1
17	UCNA601	Seakeeping and Maneuvering of ships	PC	4	4	0	0	4
18	UCNA602	Structural Design of Ships	PC	4	4	0	0	4
19	UCNA603	Ship Design - I	PC	4	3	1	0	4
20	UBMEC02	Marine Engineering - II	PC	3	3	0	0	3
21	UCNA6PA	Ship Design Calculation & Drawing - IV (SDCAD - IV)	PC	4	0	0	4	2
22	UBMECPA	Marine Engineering Laboratory	PC	2	0	0	2	1
23	UCNA6PB	Software Laboratory - III	PC	2	0	0	2	1
24	UCNA7PC	Experimental Ship Hydrodynamics	PC	2	0	0	2	1
25	UCNA7PD	Software Laboratory - IV	PC	2	0	0	2	1
26	UCNA7PA	Ship Design Calculation & Drawing - V (SDCAD - V)	PC	4	0	0	4	2
27	UCNA701	Ship Construction	PC	4	3	1	0	4
28	UCNA702	Ship Design - II	PC	4	3	1	0	4
29	UCNA703	Corrosion and Protection Engineering	PC	3	3	0	0	3
30	UCNA801	Shipyard Practice and Project Management	PC	4	4	0	0	4

Professional Elective

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
1	UCNA504	Hull survey and Hull Health Monitoring	PE	3	3	0	0	3
2	UCNA505	Foundation of Offshore Structures	PE	3	3	0	0	3
3	UCNA506	Statutory Regulations and Classification Rules	PE	3	3	0	0	3
4	UCNA604	Ship Systems Design	PE	3	3	0	0	3
5	UCNA605	Dynamics of Offshore Structures	PE	3	3	0	0	3
6	UCNA606	Introduction to Finite Element Analysis	PE	3	3	0	0	3
7	UCNA704	Experimental and Ocean Instrumentation	PE	3	3	0	0	3
8	UCNA705	Small and High Speed Craft Design	PE	3	3	0	0	3
9	UCNA706	Introduction to Computational Fluid Dynamics	PE	3	3	0	0	3
10	UCNA707	Submarine Pipeline and Risers	PE	3	0	0	0	3

Open Elective

S. No	Course Code	Course Title	Category	Contact Hours	L	T	P	C
1	UCNA507	Marine Hydrodynamics	OE	3	3	0	0	3
2	UCNA508	Fundamentals of subsea engineering	OE	3	3	0	0	3
3	UCNA509	Quality Health Safety and Environmental Management	OE	3	3	0	0	3
4	UCNA607	Technical Aspects of Ship handling in Ports and Harbours	OE	3	3	0	0	3
5	UCNA608	Elements of Geotechnical Engineering	OE	3	3	0	0	3
6	UCNA609	Work force management in Industry	OE	3	3	0	0	3

Empolymment Enhancement Courses

S. No	Course Code	Course Title	Cate-gory	Contact Hours	L	T	P	C
1	UBLECPB	Spoken English - I	EEC	4	0	0	4	2
2	UBLECPC	Spoken English - II	EEC	2	0	0	2	1
3	UBLECPD	Spoken English - III	EEC	2	0	0	2	1
4	UBLECPE	Spoken English - IV	EEC	2	0	0	2	1
5	UCMPCPY	Minor Project	EEC	2	0	0	2	1
6	UCLECPA	Professional Ethics and Personality Development - I	EEC	1	0	0	1	0
7	UCLECPB	Professional Ethics and Personality Development - II	EEC	1	0	0	1	0
8	UBIVCPZ	Industrial/Shipyard Training	EEC	0	0	0	0	2
9	UCNA7PB	Project Design & its Methodology (Practical)	EEC	3	0	1	2	2
10	UBNA8PC	Major project	EEC	22	0	0	22	11