DAV UNIVERSITY

(Empowering Students with 21st Century Skills)

FACULTY OF SCIENCE

Course Scheme and Syllabus
for

Master of Computer Applications
with Specialization in SAP
(Two Years Degree Course)

1st to 4th Semester

(As per Choice Based Credit System)

Syllabi Applicable for 2023 Batch Onwards.

Duration: 2 years (4 Semesters)

Eligibility: Bachelor's degree of minimum three years duration in BCA/B.Sc.(IT)/B.Sc.(CS) or equivalent/B.Voc. with Computer as a major subject and with mathematics at 10+2 level or at graduation level with at least 50% aggregate marks (45% in case of candidate belonging to SC/ST)

Or

Bachelor Degree in Computer Science & Engineering or equivalent with at least 50% aggregate marks (45% in case of candidate belonging to SC/ST)

Or

Any bachelor's degree of minimum three years duration with mathematics at 10+2 level or at graduation level **and** minimum One Year Diploma in Computer Applications/Science/IT or equivalent from any recognized University/Institution at least 50% aggregate marks (45% in case of candidate belonging to SC/ST)

Program Educational Objectives

PEO 1: To progress their career productively in software industry, academia, research, entrepreneurial pursuit, government, consulting firms and other Information Technology enabled services.

PEO 2: To provide post-graduate students with the proficiency to utilize new paradigms, dynamics and tools to stay ahead of the curve in creating effective solutions.

PEO 3: To achieve peer-recognition; as an individual or in a team; by adopting ethics and professionalism and communicate effectively to excel well in cross culture and inter-disciplinary teams.

Program Outcomes (POs)

PO-1: Apply mathematics and computing fundamental and domain concepts to find out the solution of defined problems and requirements. (Computational Knowledge)

PO-2: Use fundamental principle of Mathematics and Computing to identify, formulate research literature for solving complex problems, reaching appropriate solutions. (Problem Analysis)

PO-3: Understand to design, analyze and develop solutions and evaluate system components or processes to meet specific need for local, regional and global public health, societal, cultural, and environmental systems. (Design/Development of Solutions)

PO-4: Use expertise research-based knowledge and methods including skills for analysis and development of information to reach valid conclusions. (Conduct Investigations of Complex Computing Problems)

PO-5: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations. (Modern tool usage)

PO-6: Exhibiting ethics for regulations, responsibilities and norms in professional computing practices. (Professional Ethics)

PO-7: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development (Environment and sustainability).

PO-8: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice (Ethics).

PO-9: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings (Individual and team work).

PO-10: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions (Communication).

PO-11: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments (Project management and finance).

PO-12: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change (Life-long learning).

Program Specific Outcomes

PSO-1: Ability to understand and apply knowledge on analysis, design and development of SAP oriented software applications.

PSO-2: Utilize skills and knowledge for computing practice with commitment on social, ethical and legal values.

PSO-3: Ability to work with SAP technologies and pursue careers in IT industry/ consultancy/ research and development, teaching and allied areas.

Abbreviations:

Code	Definitions
L	Lecture
T	Tutorial
P	Practical
Cr	Credits

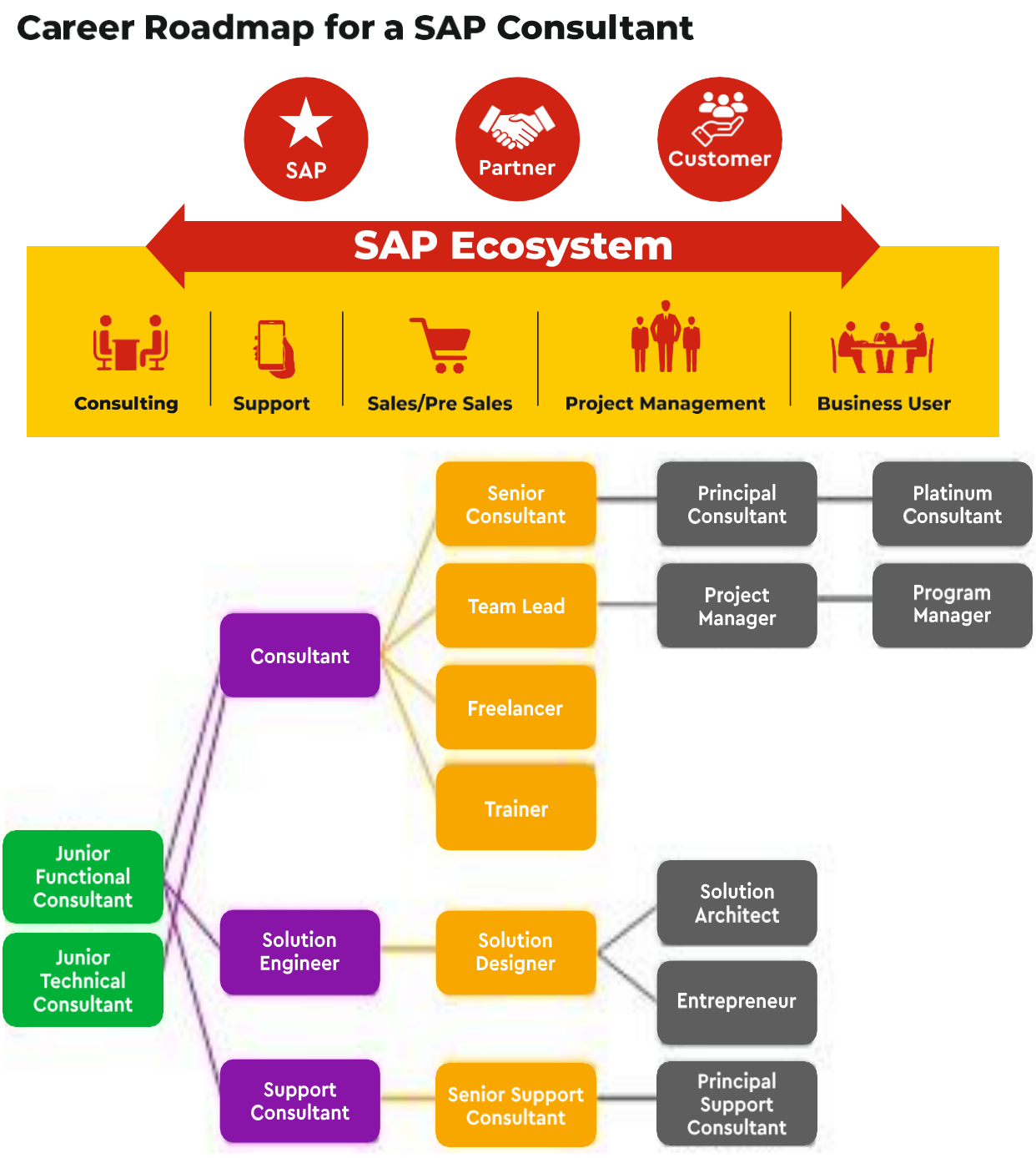
Mapping of PEO with PO

POs \ PEOs	PEO1	PEO2	PEO3
PO1			Y
PO2			Y
PO3	Y		Y
PO4			Y
PO5	Y	Y	Y
PO6	Y	Y	Y
PO7	Y	Y	Y
PO8			Y
PO9			Y
PO10		Y	
PO11		Y	
PO12	Y	Y	Y

Mapping of PEO with PSO

PEOs \ PSOs	PSO1	PSO2	PSO3
PEO1	Y	Y	Y
PEO2	Y	Y	Y
PEO3	Y	Y	Y

SAP Consultant as the Strongest Career



SAP in MCA :
Campus to Corporate Program Improving Employability

Academic Year	First Year	Second Year
Modules	Business Process Course	SAP ABAP
Cloud Learning Content	Learning HUB	Learning HUB
ILT – Classroom Training	160 Hrs	160 Hrs
Live Server Access	160 Hrs	160 Hrs
SAP New Technologies	40 Hrs	40 Hrs
Certification	Course Completion Certificate	1 SAP Global Certification
Additional Technologies	OOPS for ABAP Programming	Foundation Course of HANA & Fiori

Internship Value

- Strong knowledge on SAP Technologies
- Opportunity to work on SAP Projects
- Gain Work related experience
- Competitive Advantage in the Job Market
- Networking with the Professionals in the field
- Practical skills for Project Implementation
- Financial compensation

Master of Computer Applications
Syllabus 2023-25

Semester 1

S.No	Paper Code	Course Title	Course Type	L	T	P	Cr	Academic Delivery by
1	S4H00	SAP S/4 HANA Overview	Core	2	0	0	2	SAP-Faculty
3	CSA519	Data Structures and File Processing	Core	4	0	0	4	DAVU-Faculty
4	S4F10	Business Process in Financial Accounting	Core	1	0	2	2	SAP-Faculty
5	CSA521	Python Programming	Core	4	0	0	4	DAVU-Faculty
6	S4500	Business Processes in Procurement	Core	2	0	2	3	SAP-Faculty
7	S4600	Business Processes in Sales	Core	2	0	2	3	SAP-Faculty
7	CSA523	Data Structures and File Processing Laboratory	Core	0	0	4	2	DAVU-Faculty
8	CSA524	Python Programming Laboratory	Core	0	0	4	2	DAVU-Faculty
9	CSA517	Discrete Mathematical Structures	Core	4	0	0	4	DAVU-Faculty
							26	

Semester 2

S.No	Paper Code	Course Title	Course Type	L	T	P	Cr	Academic Delivery by
1	CSA525	Advanced JAVA & Network Programming	Core	3	0	0	3	DAVU-Faculty
2	CSA527	Advanced Web Technology	Core	4	0	0	4	DAVU-Faculty
3	CSA577	Design and Analysis of Algorithms	Core	3	0	0	3	DAVU-Faculty
4	HA100	SAP HANA Introduction	Core	2	0	2	3	SAP-Faculty
5	HA300	SAP HANA Implementation and Modeling	Core	2	0	2	3	SAP-Faculty
6	BC400	ABAP Workbench Foundations	Core	2	0	2	3	SAP-Faculty
7	BC100	Introduction to Programming with ABAP	Core	1	0	2	2	SAP-Faculty
8	CSA528	Advanced JAVA & Network Programming Laboratory	Core	0	0	4	2	DAVU-Faculty
9	CSA529	Advanced Web Technology Laboratory	Core	0	0	4	2	DAVU-Faculty
							25	

Semester 3

S. No	Paper Code	Course Title	Course Type	L	T	P	Cr	Academic Delivery by
1	BC401	ABAP Projects	Core	3	0	2	4	SAP-Faculty
2	HA400	ABAP Programming for SAP HANA	Core	1	0	2	2	SAP-Faculty
3	BC404	ABAP Programming in Eclipse	**Core**	2	0	2	3	SAP-Faculty
4	CSA628	Computer Networks and Data Communication	Core	4	0	0	4	DAVU-Faculty
5	CSA676	Artificial Intelligence	Core	4	0	0	4	DAVU-Faculty
6	CSAXXX	Discipline Elective I	DSE	4	0	0	4	DAVU-Faculty
7	CSA630	Computer Networks and DataCommunication Laboratory	Core	0	0	4	2	DAVU-Faculty
8	ENG552	Technical Writing and Communications Skills	AECC	1	0	2	2	DAVU-Faculty
							25	

Semester 4

S. No	Course Title		Course Type	L	T	P	Cr
1	CSA720	Industrial Internship (Industrial Training report and Viva-voce)	Core	0	0	40	20
2	----------	MOOC Course	Open-Elective	4	0	0	4
							24

Discipline Elective-I	
CSA605	Data Mining and Data Warehousing
CSA606	Mobile Computing
CSA607	Emerging Trends in Information Technology
CSA608	Distributed and Parallel Processing
CSA609	Information Systems
CSA616	System Simulation and Modeling
CSA617	Embedded Systems
CSA619	Advanced Software Engineering
CSA620	Compiler Design
CSA627	Research Methodology
CSA632	Big Data Analytics
CSA633	Machine Learning
CSA634	Internet of Things
CSA635	R Programming
CSA636	Mobile Application Development
CSA637	Scientific Computing using MATLAB
CSA638	Graphics & Multimedia
CSA671	Microprocessor and Its Applications
CSA678	Digital Image Processing
CSA682	Soft Computing
CSA683	System Software
CSA691	Natural Language Processing
CSA692	Digitizing Industry knowledge for Software Development
CSA693	Cybersecurity